Author:
Al-Hosan, Ibraheem

Title:
Patients' views on the service quality of primary health care services : a comparative study of PHC services provision by the security forces and general public sectors in Riyadh City, Kingdom of Saudi Arabia

Patients' Views on the Service Quality of Primary Health Care Services:

A Comparative Study of PHC Services' Provision by the Security Forces and General Public Sectors in Riyadh City, Kingdom of Saudi Arabia

Presented by

Ibraheem M M Al-Hosan

A thesis submitted to the University of Bristol in accordance with the requirements of the degree of Doctor of Philosophy in the Faculty of Medicine and Dentistry/Department of Social Medicine.

October 2005

University of BRISTOL

Word count: 79,473

ABSTRACT

It has been increasingly recognised that approaches to quality of health care systems are pluralistic and it is important to take into account patients' perspectives alongside those of professionals and managers of care. Until recently, Saudi Arabia has tended to emphasise the perspectives of professionals and managers and neglected patients' views. The aim of this research is to fill this gap by exploring patients' perspectives on the quality of Primary Health Care in Saudi Arabia and compare these with the perspectives of key healthcare informants.

This study combined qualitative and quantitative methods. The first stage consisted of exploratory interviews with a purposive sample of patients (n=10). Data derived therefrom informed the development of a survey instrument which was distributed to a sample of consecutive patients (n=866) who used primary health care services provided by the Ministries of Health and the Interior. Informal face-to-face interviews were carried out with key informants (n=10) who provided and managed the services.

Exploratory interviews with patients suggested that an established questionnaire validated in the UK (GPAS) would be broadly appropriate for the Saudi context, but that four new dimensions of quality needed to be added, cultural considerations, community participation, organisation of services, and psychological aspects of care.

The survey findings revealed patients in Saudi Arabia were less satisfied with many aspects of the quality of primary care provision compared with UK benchmarks. There were few differences in satisfaction between patients seen in Ministry of Health or Ministry of Interior PHC centres. The most important aspect of quality for patients was cultural considerations.

Interviews with key informants suggested that taking account of patients' views on service quality was not a priority.

This thesis concludes that patients' perspectives distinctly differ from the managerial perspectives which seem to dominate Saudi Arabian policy. Patients express significant areas of dissatisfaction of which managers might not have been aware. Instruments derived from the West may not cover aspects of quality that are important to patients from other cultures. A methodology has been developed which is sensitive to patients' needs in the Saudi primary care context.

ACKNOWLEDGEMENTS

I am indebted to many people whose support, advice and encouragement have enabled me to complete this work.

Firstly, my heartfelt thanks and deep gratitude go to my doctoral supervisors Professor Mike Calnan and Professor Chris Salisbury, whose academic guidance, invaluable advice, and unfailing support during the research, have been deeply appreciated.

I have received help and support from numerous people in many different ways, particularly my postgraduate student colleagues in both the Department of Social Medicine and Primary Care. Special thanks particularly go to Dr. Chris Metcalf for his valuable advice, Professor Tim Peters, Dr Alan Montgomery, Dr Caroline Yandell, Ms Sarah Coveley, and Mrs Gwen Coombs.

I am also grateful to the Director of the National Primary Care Research and Development Centre at Manchester University, Professor Martin Roland for granting me permission to use and modify the study questionnaire, the GPAS. I extend my thanks to Dr. Peter Bower of Manchester University for his help and providing me with relevant literature on the development of the original GPAS.

I extend my thanks to all those who took part in this study, particularly those patients from the twelve MoI and MoH primary care health centres which participated in the study, and managers, doctors, patients and policymakers who agreed to be interviewed.

I should like to thank the Ministry of the Interior, my sponsor, for its financial support. I am very grateful for the personal support I received from His Royal Highness Prince Mohammed Bin Naif Bin Abdulaziz Al-Saud, the Deputy to the Minster of Interior for Security Affairs.

Finally, my most sincere and heartfelt gratitude goes to my wife, Afnan, and my children Mohammed, Farris, Shahad, and Raghad for their patience and support, and to my Father and Mother who never stopped supporting and praying to God for me.

To all who have supported me, I pray God will richly bless each one of you.

Dedication

This work is dedicated to:

My father Mohammed and My mother Fawzia

My beloved wife Afnan

My sons Mohammed and Farris

My daughters Shahad and Bristol born, Raghad

For their unfailing love, support, and prayers throughout the course of this thesis

May God bless you all.

DECLARATION

I declare that the work in this thesis was carried out in accordance with the Regulations of the University of Bristol. This thesis is the result of my own investigations, except where otherwise stated. Other sources are acknowledged by footnotes giving explicit references. A bibliography is appended.

The work is original, except where indicated by special reference in the text, and no part of the thesis has been submitted for any other academic award.

Any views expressed in the thesis are those of the author and do not necessarily represent the views of the Saudi Arabian Authorities.

SIGNED: IBRAHEEM AL-HOSAN ..... DATE: 21/11/2005

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1. GENERAL INTRODUCTION

1.1. BACKGROUND TO THE STUDY

Patients' views on health care services have become widely recognised as a central theme in health care policy in general and health care reform in particular.[1-4] The aim of this study is to explore patients' views in relation to two aspects of health care: primary health care and quality. The focus of the research is important for two reasons: first, primary health care has long been implemented and integrated in the Saudi national health care system because it is increasingly seen as an important method for providing care that is efficient and comprehensive.

Second, since the 1990s, profound economic, political and social changes have contributed to a dramatic shift in health care policies around the world, resulting in greater emphasis on improving performance and quality rather than quantity.[5-8] Hence, debate has passed from discussion of the appropriateness of primary health care to policies and methods to improve its quality.

The quality of care is influenced by three main perspectives: managerial (economic efficiency), professional (clinical effectiveness) and patient.[9] Hence, quality is a multidimensional notion and patients' views are an important theme in this discussion. Analysis of the literature indicates there is wide agreement as to the importance of eliciting patients' views and taking them into account when setting priorities for improving health care.[10-15] As Larsson et al. point out, patients' views in this sense are seen as one aspect of quality and an 'endpoint in quality evaluation'.[16] Evidence from empirical research identifies compelling links between taking into account patients' views and their satisfaction.[14,17-23] Satisfied patients are more likely to comply and adhere to doctors' instructions and treatment plans.[19] Dissatisfied patients, on the other hand, are likely to distrust their doctors, opt out of treatment plans, miss appointments and either

seek referral to another doctor or seek alternative providers, such as the private sector.[23] Patients' views are also a significantly valuable source for providing feedback to those evaluating performance and in highlighting information about service quality and areas needing improvement.[14,24-31]

1.2. STUDY STRUCTURE

This introductory chapter has a threefold purpose. First, it aims to introduce the reader to the rationale and structure of the study. Secondly, it describes the study background. Thirdly it provides insight into the study setting, which is the Saudi Arabian health care system and current government policies relating to primary health care and quality programmes. It therefore presents the backcloth against which the research will be conducted.

Chapter two reviews past and contemporary literature on primary health care, commencing by exploring its history, definition and concept. It also considers the importance of primary health care from an international perspective, in which primary health care is widely seen not only as a tool for improving health care itself but also as an essential aspect of the ongoing overall development of nations. Although the importance of primary health care has long been recognised, the primary health care concept, strategies, and policies outlined by the World Health Organisation in its well-known Alma-Ata Declaration,[32] dramatically differ from primary medical care as understood in the West.[33] This chapter contrasts these two models of primary health care and also elaborates on the extent to which these models are relevant to the Saudi Arabian context. It concludes by identifying some of the major challenges to applying the WHO model of primary health care (which is itself still evolving), particularly in relation to the improvement of the delivery and quality of services provided at this level of care.

Chapter three focuses on key issues related to the assurance and improvement of quality from theoretical perspectives from organisation theory introduced by quality theorists such as Deming and Juran.[34] The extension of these ideas from the industrial sector to the public sector, including health care, is also discussed. Some of the main challenges facing the evaluation of service quality, given its complexity, and multidimensionality, are discussed. Different attempts in the literature to conceptualise quality and define it from a pluralistic approach are presented.[31,35,36] This chapter also highlights international and local studies in the field of quality assurance in primary health care.

Chapter four is the last chapter of the literature review section. The definition of primary health care and quality outlined in the previous two chapters provide the conceptual framework against which patients' views of the quality of health care are assessed and measured. This chapter explores the importance of patients' views on health care as a means of improving quality in general. The literature reviewed is summarised and research gaps identified.

Chapter five has two aims: to elaborate on the aims and objectives of the study and to provide an account of the study's design, research methodologies, and rationale for the choice of methods to elicit and evaluate different stakeholders' perspectives within the primary health care system in Saudi Arabia. The chapter is divided into two main sections: the first briefly describes the history of social science research and its underlying theoretical development. It discusses different research designs commonly utilised in health care research. The second section details the methods employed to conduct the empirical work. A sequential and concurrent mixed-method strategy is used, which combines quantitative and qualitative data derived from a cross-sectional survey of patients and interviews with patients and key health care providers respectively.

Chapter six describes the findings derived from semi-structured interviews conducted with ten individual patients from Ministry of the Interior Primary Health Care Centres and describes how these findings were then used to form the basis for a questionnaire administered to larger groups of patients in both

Ministry of the Interior and Ministry of Health primary health care centres to elicit their views on quality of care issues. These findings were later compared with the views of doctors, primary care managers and policy makers. Patients' views on three main topics, namely, primary care, quality of health care, and specific aspects of service quality, are presented.

Chapter seven presents the findings of the main empirical fieldwork for this study, i.e. the patient survey. Findings are presented in five parts: characteristics of participants; (ii) patients' views on the quality of primary care services; (iii) comparison between MoI and MoH sectors before and after adjusting for patients' characteristics; (iv) association between patients' socio-demographic characteristics and satisfaction; and (v) key determinants of satisfaction. Throughout these sections, comparisons between the quality of primary health care services provided by the Ministry of Health (MoH) (serving the general public sector) and the Ministry of the Interior (MoI) (serving military personnel and their families), are made, bearing in mind the different presenting physical and psychological health problems likely to occur among MoI patients (post-trauma stress, gun shot wounds) as compared with MoH patients.

Chapter eight presents findings derived from analysing the contents of semi-structured interviews with ten key health care informants (policymakers, doctors, and primary care service managers) focusing on the quality of primary health care and the relevance of patients' views. The findings are presented under three main thematic sections, with sub-themes within each section.

Chapter nine presents an overall review of the main findings and their implications for health care policy in Saudi Arabia. It also highlights this study's contribution to the body of literature in this field and recommends areas for future research.

1.3. BACKGROUND TO THE STUDY: THE SAUDI ARABIAN HEALTH CARE POLICY CONTEXT

> *"The Kingdom's policy on health is simply expressed by the provision of free health services for the benefit of all the citizens of Saudi Arabia". (Al-Farsy, p.262[37])*

The policies of the Saudi Arabian government regarding health care provision have changed dramatically over the last seventy years. Historically, the first organised health care services can be traced back to 1926[37,38] when King Abdulaziz Al-Saud (the founder of the country) issued a magisterial decree to establish the service, which subsequently consisted of hospitals and dispensaries in three Saudi cities: the holy city of Makkah, Madinah, and Jeddah, but not the capital Riyadh.[39] These three cities took priority because Makkah and Madinah hold the two most sacred sites for Muslims around the world and millions of pilgrims attend these cities for prayers, and Jeddah is a port city and the main access to the two holy cities. Saudi Arabia at that time was a poor, traditional country. Funds were simply not available to provide trained medical staff nationwide. Thus governmental policy at that time had no nationwide strategy for health care provision since most attention was paid to providing essential health care services to those who visited Saudi Arabia for holy festival seasons. Lack of a national policy on health provision was due to two main reasons: lack of resources and lack of trained personnel (i.e. doctors, health care managers, pharmacists, etc.) Statistics show that before the discovery of oil in 1931,[40] there were no more than 300 beds in all Saudi Arabian hospitals.[39]

As the search for and extraction of oil continued, Saudi Arabia used the immense wealth derived therefrom to embark on changes that involved all aspects of Saudi lives, including health care. In 1951, all the four scattered health care directorates around the Kingdom (Makkah, Madinah, Jeddah, and Taif[39]) were united under one Ministry: the Ministry of Health (MoH). Since that time, the MoH has been the main national agency providing free health care services and medication to all Saudi citizens and expatriates living in Saudi Arabia.

Roemer categorises health care systems around the world into four types: (1) socialist health systems (e.g. the former USSR, Cuba); (2) welfare-oriented health systems (e.g. Canada, Japan); (3) entrepreneurial-health systems (e.g. the USA); and (4) comprehensive or collectivist health care systems (e.g. the UK).[41] Saudi Arabia applies the comprehensive model of health care provision, since the Saudi government takes full responsibility for providing health care services to all citizens free of charge. However, unlike other countries, where services are delivered free at point of delivery and citizens contribute towards health care costs through the taxation system, Saudi Arabia has no taxation system and all health care services, as well as other welfare services such as education, are provided directly out of government revenue. Thus, the Saudi Arabian health care system can be viewed as similar to the National Health Service (NHS) in the organisational sense, but paid for directly by the government and not through taxes or insurance. Economically, the question may be raised whether this is a good long-term policy given the rapidly expanding population and fluctuation in oil revenue? In addition, will future governments be forced to downgrade the quality of care provided?

The primary health care sector also resembles the NHS system in the UK, in that primary care centres act as gatekeepers to the rest of the health care system. The Saudi Arabian government through the MoH and other health care agencies employs hundreds of thousands of doctors, nurses and technicians, paramedics, and other health care professionals mainly on a salary basis (see figure 1.3).

Because of their country's affluence as the largest oil producer in the world,[39] Saudi citizens take for granted the free provision of care, and view other social services, such as education, their automatic right, and their provision a duty which the government should fulfil. On its part, the government has used its oil revenues and spent enormous amounts of money on health care development, particularly at the tertiary level of care, such as hospitals and specialist hospitals (eye hospitals, cancer research hospitals, etc.). Statistical figures indicate a rapid expansion of the budget allocated to health care in recent years. From the $47.2

million spent on health care in 1970, this figure had risen sharply to $2864.8 million in 1985 and continues to rise by approximately 5.3% every year.[39] As a result, the number of hospitals and beds has grown from 75 and 9837, respectively, in 1971, to 290 and 42626, respectively, in 1996, and 333 and 47339, respectively, in 2004.[42]

A New era brings new challenges

Oil discovery has brought to Saudi Arabia new opportunities as well as challenges. A major challenge to governmental health care policy has been the rapid growth of the Saudi population and dramatic changes in socio-economic characteristics, and mortality and morbidity rates. Throughout Saudi history, only four nationwide censuses have been carried out. The first census in Saudi Arabia was conducted in 1974, estimating the population at just over 7 million.[43] The second census was carried out in 1987 and showed a dramatic increase in the population, to 13.6 million. The third census of 1992 revealed a total of just under 17 million. Early in 2004, the fourth census was carried out and preliminary figures suggest the population is around 22.67 million,[44] 80% of whom live in large cities and less than 5% are semi-settled or nomadic.[45] Therefore, despite the government's extensive investment in health care developments, the dramatic increase in the Saudi population means that demand for health care is exceeding available supply, particularly hospital care.

Moreover, although the Saudi Arabian government has successfully achieved a 94% record in immunisation coverage for some communicable diseases,[46] such as polio (see health statistical profiles in tables 1.2-1.7), changes in demographic status as well as lifestyle have resulted in new challenges facing the Saudi health care system. There have been noticeable changes in morbidity patterns. MoH official statistics show that the number of patients with psychological and

neurological related diseases has risen dramatically in the last 20 years[a]. The number of those diagnosed with stress, psychological and neurological related diseases grew from 47,720 cases in 2000 to 406,218 cases in 2003. In addition, the number of patients with heart and blood vascular diseases rose sharply from 126, 28 in 2000 to 376,406 in 2003.[39] Motor accidents also present another challenge to health care policy since car accidents continue to rise, from 122,320 in 1995 to 261,872 in 2004.[45] The number of fatalities and injuries (including resultant disabilities) in the same period rose from 3789 and 30,439 to 4293 and 31,033, respectively.[47] Many of those involved in car accidents require expensive and long-term rehabilitation programmes.

Table 1.1: Socioeconomic indicators

	%	Year
Adult literacy, total (%)	80	1999
Adult literacy, male (%)	88	1999
Adult literacy, female (%)	72	1999
School enrolment ratio, first level (total)	112	1999
School enrolment ratio, first level (male)	118	1999
School enrolment ratio, first level (female)	106	1999
School enrolment ratio, second level (total)	76	1993
School enrolment ratio, second level (male)	81	1993
School enrolment ratio, second level (female)	70	1993
Per capita (US$) of currency adjusted for purchasing power GNP	8485	2002
Regular smokers total (%)	20	1999
Regular smokers- males +15 years (%)	38	1999
Regular smokers -females +15 years (%)	2	1999

Source: World Health Organisation, Eastern Mediterranean Regional Office[48]

[a] It is worth bearing in mind that the increase in the number of cases of diseases is probably more to do with more people being diagnosed, which in turn is related to the greater number of doctors in hospitals, rather than a genuine increase of cases e.g. Neurology disease.

Table 1.2: Budgetary resources indicators

	%	Year
Allocated to MoH from total government budget (%)	7.1	2001
MoH expenditure as % of GNP	2	2001
Total health expenditure as % of GNP	5.3	2000
National expenditure on health per capita (US$)	354	2000
Total expenditure on health per capita (US$)	448	2000

Source: World Health Organisation, Eastern Mediterranean Regional Office[48]

Table 1.3: Human and material resource indicators

	%	Year
Physicians per 1000 population	15.3	2001
Dentists per 1000 population	1.8	2000
Pharmacists per 1000 population	2.6	2001
Nursing and midwifery personnel per 1000 population	32.3	2001
Hospital beds per 1000 population	22.4	2001
PHC units and centres	1.2	2003

Source: World Health Organisation, Eastern Mediterranean Regional Office[48]

Table 1.4: Indicators of coverage with primary health care

	%	Year
Population with access to local health services, total (%)	99	1996
Population with access to local health services, urban (%)	100	1996
Population with access to local health services, rural (%)	95	1996
Infants fully immunised with BCG (%)	94	2003
Infants fully immunised with DPT (%)	95	2003
Infants fully immunised with OPV3 (%)	95	2003
Infants fully immunised with Measles (%)	96	2003
Infants fully immunised with Hepatitis B vaccine (%)	95	2003
Population with access to safe drinking water (%)	98	2000
Population with adequate excreta disposal facilities (%)	86	1994
Pregnant women attended by trained personnel (%)	98	2000
Deliveries attended by trained personnel (%)	91	2002
Infants attended by trained personnel (%)	96	1996
Married women (15-49) using contraceptives (%)	32	1997

Source: World Health Organisation, Eastern Mediterranean Regional Office[48]

Table 1.5: Health status indicators

Newborns with birth weight at least 2.5 (%)	95	2000
Children with acceptable weight for age (%)	93	1999
Infant mortality rate per 1000 live births	19.1	2001
Probability of dying before reaching 5th birthday per 1000 live births	30	2000
Maternal mortality rate per 1000 live births	1.8	2000
Total life expectancy at birth (years)	71.4	1996
Male life expectancy at birth (years)	69.9	1996
Female life expectancy at birth (years)	73.4	1996

Source: World Health Organisation, Eastern Mediterranean Regional Office[48]

Table 1.6: Selected morbidity indicators

	Total cases	Year
Cholera	38	2002
Malaria	1724	2003
Poliomyelitis	0	2003
Measles	1208	2003
Pulmonary tuberculosis	2 307	2003
Diphtheria	2	2003
Tetanus	12	2003
Neonatal tetanus	31	2003
AIDS	19	2002
Meningococcal meningitis	55	2002

Source: World Health Organisation, Eastern Mediterranean Regional Office[48]

Commentators such as Mufti[39] and Al-Yousuf et al.[45] have also observed that health care policy in Saudi Arabia faces other challenges, such as overstretched health care services, due to it being a huge country and the hundreds of scattered villages throughout the kingdom, sometimes inhabited by only a few hundred villagers who demand hospital care close to them. Al-Farsy has also described the massive urbanisation that has taken place since the oil boom, citing the case of Riyadh city, the capital city of the kingdom, where the population increased from 169,000 in 1962 to surpass 2 million in 1985. Massive urbanisation has placed another burden on government provision of free services at the hospital level to all citizens.[37]

Another challenge facing Saudi health care policy arises from the kingdom's citizens' increased contact with the outside world. Social changes (i.e. better educated population, increase in income) have raised patients' expectations and demand for highly specialised procedures which, in turn, have pushed the government towards more expensive, highly specialised health care.[39] Following the increasing revenue available from oil from the beginning of the 1970s, the government formed a five-year plan to invest this revenue in strategies to improve the economic and social welfare of the Saudi population.

The effect of the above cited changes within only two generations has transformed the lives of Saudi people, who have evolved from desert living transitory Bedouins to settled urban city dwellers in well developed modern cities. This fundamental change in socio-economic culture has necessitated a shift from the populations' centuries-old practice of reliance on self-healing and traditional remedies to dependence on modern health care services that have suddenly emerged. The following quote from a Western physician who had been living in Saudi Arabia for some time graphically illustrates the transitional period between the traditional and new approach to Western medicine, where elements of traditional practice still linger:

> *"Nothing in Western medicine prepared me for the transition. The surroundings looked familiar: patients, emergency room, clinics, wards, labs, x-ray, ultrasound, endoscopy, magnetic resonance imaging but the substance beneath the surface was foreign. I can only describe it as a medical culture shock. What is different here? Some of the diseases and the reactions to them, the language, the customs and the culture. Diseases are the minor difference; the major one is the Saudi approach to Western medicine. How often have I seen the recent cautery marks of Bedouin medicine on the abdomen of a patient who has requested an endoscopy or a "computer scan"?" (Sullivan, p. 444[49])*

Given the aforementioned problems that have affected Saudi health care provision in recent years, the government has started to explore means of providing cheaper health care without adversely affecting the Saudi people's right to freely available health care. The WHO initiative in 1978 to promote primary health care programmes was widely welcomed by many countries,

including those who saw the programmes as providing a solution to challenges faced by the Saudi Arabian health care system. The following section provides basic but important information about Saudi Arabia. Chapter two will discuss primary health care initiatives and policy in the country in more detail.

1.3.1. The study setting

A socio-demographic profile of Saudi Arabia provides an introduction to the setting of this study. It is also important to note that acquiring statistical data from developing countries is not always easy. With reference to Saudi Arabia, Al Gaman observed:

> *"When obtaining statistical information and data about health indicators in Saudi Arabia, the available data should be handled with considerable reserve because some governmental agencies are not properly equipped for accurate data collection. Sometimes they conceive their function as "boosting morale" rather than recording accurate information. This leads to the publication of figures with poor correspondence to any verifiable observation". (Al Gaman, p.67[50])*

Generally speaking, when discussing a health care system in a country, it is important to discuss, at least, two issues, its administrative system, and the cultural environment. However, a detailed historical and cultural account of Saudi Arabia is not the focus of this study and has been discussed elsewhere.[37,38,51] Regarding the administrative system, Saudi Arabia is a monarchy and ruled by a king who is the head of the state and head of the cabinet of ministers. The Holy Quran is the source of its constitution and legislations.

The kingdom is located in the Middle East in the Asia continent. The Kingdom occupies 2,240.000 square kilometres (see table 1.1), most of which are uninhabited desert areas. The Kingdom is bordered to the North by Iraq, Kuwait, and Jordan, to the East by Bahrain, the United Arab Emirates, Qatar, and the Arabian Gulf; to the South by Yemen and the Sultanate of Oman; and to the West by the Red Sea.[52] There are six major cities, and Riyadh is the capital city (where this study took place).

Figure 1.1: Map of Saudi Arabia[53]

Table 1.7: Demographic indicators

Area in square kilometres	2250000	2003
Total population in thousands	21890	2003
Urban population out of total population (%)	85	2003
Crude birth rate per 1000 population	31	2003
Crude death rate per 1000 population	3	2003
Population growth rate (%)	3.3	2003
Population below 15 years (%)	40.8	2000
Population 65 years and over (%)	3.1	2000
Dependency ratio (%)	80	2000
Total fertility rate	4.8	2003

Source: World Health Organisation, Eastern Mediterranean Regional Office[48]

1.4. HEALTH CARE SERVICE PROVIDERS IN SAUDI ARABIA

Health care provision in Saudi Arabia can be divided into three main sectors: public health care provision, military health care provision, and the private health care sector. The public health care sector is the largest and provides care to the vast majority of Saudis. The following section will focus on the Ministry of Health.

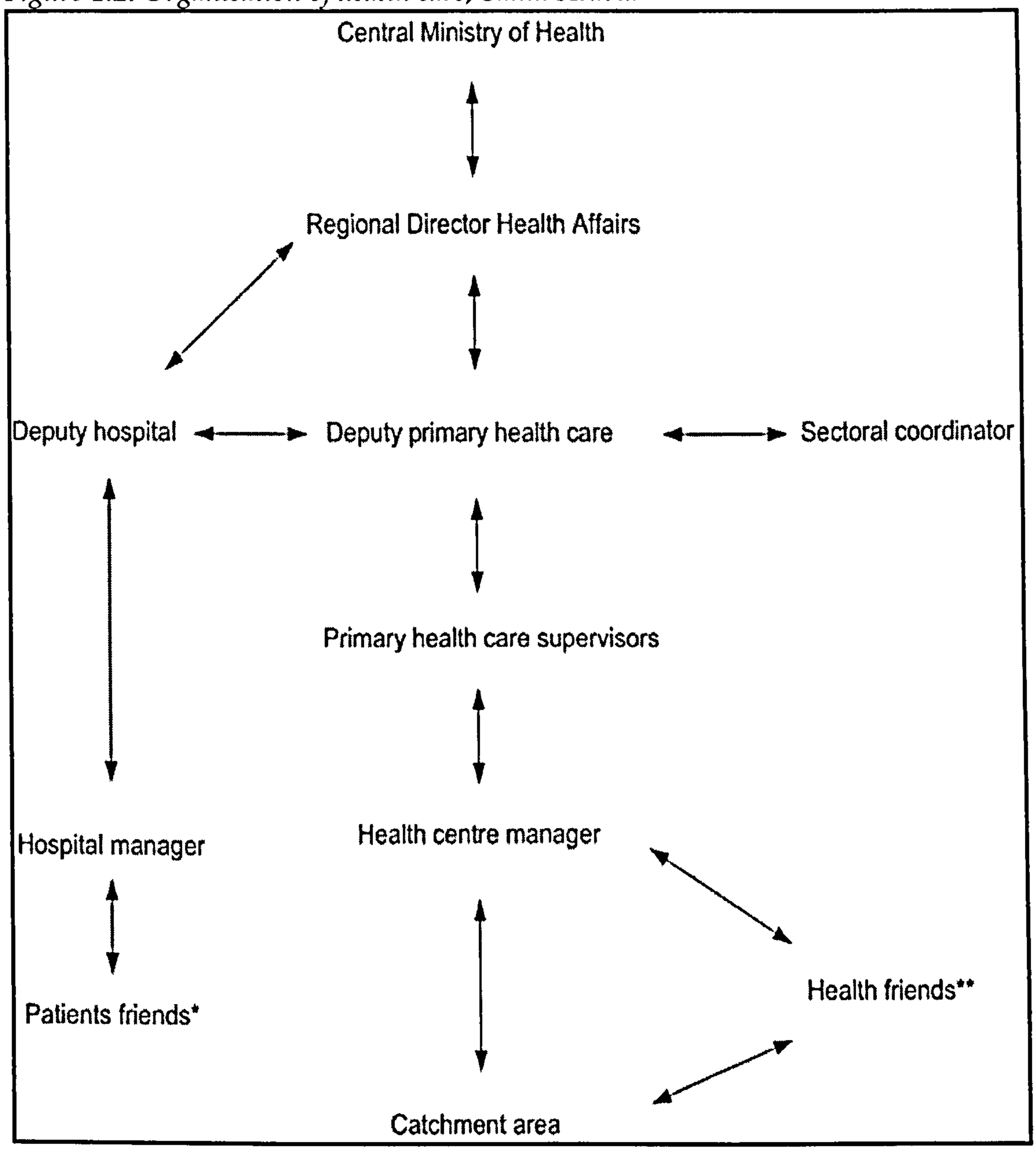
1.4.1. Ministry of Health

The Saudi Arabian Ministry of Health (MoH) was established in 1951. Initially, the first task for the MoH was to unite all the scattered health care directorates around the kingdom under one central administration.[37] Currently, the MoH is the main health care agency in Saudi Arabia and is responsible for running and providing health care services (curative, preventive and rehabilitative) to all Saudi citizens at three levels: primary care (e.g. primary care centres); secondary level care (e.g. general hospitals); and tertiary (specialised) level of care (e.g. eye, chest and TB hospitals). By 2004, there were 3028 primary health care centres and 333 general hospitals operated by the MoH throughout the kingdom.[54]

The MoH's functions also include strategic planning, monitoring and controlling all health care related activities in Saudi Arabia. Moreover, it is the authoritative agency that represents the country in official and nonofficial health care matters internationally.[45] The MoH also runs a number of teaching and training hospitals and has its own nursing training institutes.

Since its inception, the MoH has undertaken a series of health care reform strategies to improve the efficiency and effectiveness of health care delivery. Recently, it has introduced a decentralisation plan whereby Saudi Arabia is divided into 19 health regions with independent resource allocation, policy plans, employment and facilities, but which share with other regions a national health care strategy[45] (see Figure 1.2).

Figure 1.2: Organisation of health care, Saudi Arabia



**Patients' friends are voluntary bodies which help long-stay patients and their carers and families.*

***Health friends are individuals co-opted onto committees to give feedback to managers.*

Source: Al-Yousuf et al.[45]

In the 1970s, the rapid rise in oil prices brought immense income to the Saudi government. The government subsequently decided to set up a series of five-year socioeconomic strategic plans to allocate oil revenue to all aspects of Saudi lives,

including health care.[55] The spending assigned to the health sector grew from 3.5 billion (approximately £500 million[a]) in the first strategic plan from 1970-1975 to 6.8 billion SR (£971 million) in the fifth strategic plan from 1989 to 1994, and has continued to increase.

Table 1.8: Number of hospitals and health care professionals in Saudi Arabia from 1970-1990.

	1970	1990
Hospitals	74	257
Hospital beds	9030 (1.3/1000)	41123 (3.4/1000)
Primary health care centres	591	3028
Physicians	1172	22136 (1/ 544)
Nurses	3261	48477
Paramedics	1741	22410

Source: Al Rabeeah[54]

1.4.2. Ministry of the Interior health care services

As well as the Ministry of Health there is a parallel health care system operated by the Ministry of the Interior. The Saudi Arabian Ministry of the Interior (MoI) is the official government agency responsible for law and order enforcement and national security. Among its principal activities are policing, immigration control and coastal and border guarding, anti-drug trafficking, maintaining prisons, and recruiting and training officers and soldiers. The MoI is a major employer in the country and although the vast majority of its employees are military personnel, it also employs citizens in civilian posts. In its effort to provide social and welfare services to its employees, the MoI started its own institutionalised health care service on a small scale in 1968, with a small number of dispensaries distributed in police stations or military training schools around the city of Riyadh.[39] In an attempt to expand and coordinate its health care services' facilities, the MoI established in 1976 a health care directorate that later became the main directorate responsible for health care planning and delivery by the MoI. The

---

[a] The Saudi currency is pegged by the government to the US dollar. 1 US dollar equals 3.75 SR. The SR equivalence to other currencies, for example, the British pound, is subject to fluctuation.

General Administration of Medical Services (GAMS) constructs future health care plans to build and run hospitals and primary care centres in the Kingdom. In 1984, the MoI opened its first hospital in Riyadh city. The Security Forces Hospital (SFH) is modelled on a Western style system and is regarded as one of the most advanced hospitals in the region, with outstanding medical technology and multinational expert manpower. There are also 69 primary care centres run under GAMS in the Kingdom and eleven in Riyadh city, some of which are located inside public prisons.

GAMS' records in 2001[56] show the number of personnel working in the MoI health care sector was 4001, of whom 17% were doctors, 38% were technicians, and 45% were providing administrative and support services, including nurses. Over two thousand people worked for the SFH and nearly two thousand worked in primary care centres. The total number of consultations carried out at the MoI's hospital and its primary care centres in 2001 was 3,856,965, of which 2,528,073 (65.5%) were consultations at primary care centres, indicating the important role of primary care centres in the MoI. As well as medical consultants and dental services, MoI primary care centres offer routine laboratory tests and x-ray services to all eligible patients and have a small pharmacy, dressing and minor operations rooms, and a manual filing system.

1.4.3. Other governmental and non-governmental health care providers in Saudi Arabia

Saudi Arabia is geographically a large country and about 20 per cent of its population live in scattered and remote areas. In the government's effort to provide equal and accessible health care services to all, the decision was taken to establish a number of health care service providers to maximise coverage. Some of these health care services are managed by non-health care establishments, such as the Medical Services of the armed forces or health care services under the Education Ministry. However, although these services are popular with those who work in the institutions providing them, recent studies have indicated that

these services overlap and have several economic and management limitations which have resulted in poor or unsatisfactory performance. Al Rabeeah reviewed the Saudi health care system and concluded that many of the challenges facing it are related in one way or another to multi-health care provision: "(a) multiplicity of health care authority and planning; (b) lack of coordination; (c) poor communication; (d) poor referral system; e) poor priority system; (f) improper utilisation of resources; and (g) lack of authority and leadership"(Al-Rabeeah, p.10[54])

One problem identified by Al Rabeeah is the multiplicity of health care services in Saudi Arabia, as a result of the large number of different agencies providing health care in the kingdom such as:

Public sector health care providers:

As well as the health care systems operated by the MoH and MoI, there are others provided by a number of governmental and semi-governmental institutions, for example, the Saudi Red Crescent Society, National Guard, Medical Services of the Armed Forces, Oil company health care services (e.g. ARAMCO), and Health care services located in schools and educational institutes.

Private sector health care providers

Numerous hospitals and primary health care centres offer services for a fee in Saudi Arabia, such as Saudi-German hospitals, BUPA hospitals, etc.

Recently, the Saudi government has established a National Health Care Council aimed at putting together a national plan for health care delivery. However, this Council has been criticised for lacking power and authority to execute decisions made.[54]

1.5. THE STUDY RATIONALE

In spite of the rapid achievements Saudi Arabia has accomplished in establishing and developing an extensive health care infrastructure and the enormous scale of employment in health care services' provision, the economic affluence and political desire to provide first class health care services to its citizens and expatriates may not continue to be achievable or, at the very least, not sustainable. As well as the challenges identified earlier, such as the rapid growth of the Saudi population and changes in patterns of mortality and morbidity, the other major challenge to the continuation of health care policy is the decrease in financial resources as oil production and price are subject to drastic fluctuations. The combined impact of the cited challenges is becoming increasingly noticeable. The Saudi people have started to become more critical of public health care services, and to notice and experience a decrease in health care services' quality. The level of underutilisation and dissatisfaction with the quality of services is on the increase.[57,58] Although a review of the literature shows this phenomenon is reported at both primary and secondary health care levels, this thesis will focus exclusively on the primary health care level.

An overview Saudi health care policy suggests the rapid investment in health care by the Saudi government in the last 30 years has also generated inherently complex problems. For instance, the wealth of Saudi Arabia has enabled the country to build a large health care network of hospitals and primary care centres in only a few decades, but very few qualified managers, specialists, and general practitioners exist to run and plan them.

To overcome this problem, the government has embarked on two parallel strategies: first, a large-scale recruitment drive to hire foreign professionals (doctors, nurses) and Saudi citizens with or without experience as managers for these facilities. Second, to adopt health policies promoted by international agencies, for example, agreeing to endorse primary health care services promoted by the WHO during the well-known Alma-Ata conference in 1978.[59]

Regarding the first strategy, this situation has resulted in huge numbers of expatriates working in the health care sector (in 1998, Saudi physicians constituted 20% of the total number of physicians[45]). The reliance on foreign workers has been viewed unfavourably by some who argue that they have a deleterious effect on both Saudi culture and health care services.

Regarding their impact on health care services, it is contended that expatriates are more likely to view themselves as "hired functionaries" and thus be less likely to take active, creative responsibility for their work.[60] Moreover, cultural differences in self-presentation and role expectation along with linguistic barriers may hinder the interpersonal doctor-patient relationship, resulting in an unsatisfactory outcome.[60]

Further, health care policies promoted by the WHO and other international agencies may not have cross-cultural applicability, making it difficult to transfer them from one health care system to another. In addition, it has been argued that the political and medical profession culture that flourished from the 1960s until the early 1980s minimised the role of consulting and involving patients in health care policies, leading to the rise of professional-centred health care services and a sole focus on curative care.

This thesis argues that underestimation of the importance of cultural factors when accepting new health care policies,[61] the multi-cultural diversity of the medical profession within the Saudi health care system, and lack of scientific research have resulted in a health care system that is detached from its patients.

If the goal is to provide comprehensive, equitable, and quality primary health care services, then Saudi Arabia's provision and support of primary health care delivery and integrating it into the overall health care system is only one step towards achieving this goal. In order for these services to be widely accepted and utilised and patients' satisfaction with them to increase, they have to be tailored around patients' needs and demands. Analysis of international health policies in this area shows that responsiveness and socially acceptable care are high on the agenda.[5,62] As indicated briefly in the first section of this chapter and as will be

argued throughout this thesis, quality is a multidimensional concept, hence patients' views on it are important for the continued provision of quality primary health care services as well as clinical effectiveness, equity, and economic factors, such as spending money to improve these services. Moreover, exploring and accounting patients' views on quality are not only an important part of a responsiveness strategy but also offer policymakers and service managers the opportunity to perceive quality through patients' eyes, which may assist them in meeting patients' needs as well as their own targets of improving the quality of these services.

Although quality improvement is currently on the MoI's health care services agenda, evidence suggests these services are not on the whole responsive to patients' needs (Saudi Arabia was rated 67th by the WHO in terms of health care responsiveness to patients).[5] Moreover, health care officials have complete power over policymaking and patients' views on quality are neglected. Given the fact, however, that national security is a very important issue in Saudi Arabia, it is in the government's interest to ensure military personnel are at the utmost level of fitness and receive high quality primary health care services. It is therefore important to take into account the views of such personnel as patients. Ignoring their views could be detrimental to their physical and mental well being and affect their ability to effectively carry out their military role.

Despite a growing number of health care studies in Saudi Arabia in recent years, the focus has been primarily on patient satisfaction and little attention has been paid to patients' views about which aspects of care are most important and contribute to service quality. Further, recent studies from the West show that both the methodological and theoretical foundation of satisfaction research, particularly in health care, is being questioned.[23,63-68] Recent Saudi studies report patients have a high level of satisfaction[69] with health care but their satisfaction may not necessarily reflect their awareness of what they need or what they think constitutes quality.

In addition, it is not clear what status patients' views have within the Saudi Arabian health care system. Emphasis on patient satisfaction and views arose within the consumerist-oriented health care services in Western democracies. Within the centrally-managed services in Saudi Arabia -- particularly in the military sector-- patients' views may be seen as less relevant, or even as a threat to health care officials' power and social status, .

Nevertheless, having demonstrated above the importance of eliciting patients' views on quality, this study aims to ascertain to what extent they correspond with or contradict the assessments of quality made by managers and professionals, and to identify the current role of patients in determining the quality of primary health care services.

1.5.1. The significance of studying Military based Primary Healthcare Services

> *"The constant primary objective of the armed forces is to maintain a state of operational readiness. While numerous significant variables contribute to such a state, it is doubtful if any are of greater importance than the state of well being experienced by military personnel. Further, it is increasingly recognised that the sense of well-being of military personnel is significantly impacted by the sense of contentment with the health of each family member and the delivery of health care to family members" (Stanley and Blair, p.1[70]).*

Generally speaking, PHC services operated by the MoI are no different from PHC services run by other providers in Saudi Arabia in terms of structure, technical facilities (i.e. lab, x-rays), variations in doctors' specialties and management style. However, PHC services run by the MoI differ in other aspects, particularly the characteristics of the population they serve and, more importantly, the culture in which these PHC services exist and function.

Regarding the characteristics of the population, it is widely accepted that military sociodemographic variables (such as military rank, and physical and emotional tensions) along with other factors (such as preferential treatment to certain ranks and their dependants) can influence the patient-providers relationship and

satisfaction with the service as a whole. Moreover, the distinct sociodemographic characteristics possessed and experienced by military personnel can have an impact on their health status and health needs (i.e. stress, physiological trauma, isolation, etc.)

As regards the culture in which PHC services exist and function, the military is a highly organised subculture, characterised by rigid authority and rank, with doctors allocated a high position in the hierarchy and patients at the bottom of the scale. The implication of this for patients could include less willingness to express opinions or open criticism, particularly less senior ranks. The literature lacks studies in this area, particularly from Saudi Arabia.

Study of health care provision in the military sector is important because:

Firstly, military health care services are the best in the country:

- The physical, emotional and psychological well being of this sector's personnel is essential for maintaining present and future national security. Military health care services have more resources, better capacity, physical structure, and quality of equipment and health care personnel than services provided by other bodies. Such services have the highest standard so are viewed as a flagship in the country, setting the standard to which other services aspire. If there are problems with them, then there are likely to be problems elsewhere.
- Any improvement in military healthcare services will encourage other private and public healthcare services to develop and improve their services.

Secondly, military health care services differ from those of the civilian population:

- Military personnel are transient by nature and live apart from the general population (e.g. most military cadets live in university type halls of residence and visit campus GPs rather than local GPs).

- Military personnel have distinct clinical needs which results in them requiring and expecting different aspects of service. For instance, their military duties may result in military personnel presenting with distinct types of problem, e.g. physical and psychological trauma. Such trauma can have a devastating impact on personnel and their families. The military sector may therefore provide a different type of service to 'normal' primary care.

In view of the above, this study will investigate and provide insight into military health care system patients' views on the quality of services provided by the MoI. In the course of the study, whether military patients' views differ from those of the general public, i.e. MoH patients, will be investigated. Thus, military service and general primary care service quality will be compared.

1.6. STATEMENT OF THE RESEARCH PROBLEM

The aim of any health care system is to optimise the health of the population and to give equal and undifferentiated opportunity to all to access and achieve optimal care.[71] In Saudi Arabia, governmental health care providers are committed to achieving the government's aims of providing best possible health care services to all the Saudi population, to improving the quality of citizens' lives, and to helping them fully engage in the country's development plan and to benefit from it.[37,43]

Primary health care services have become a central and integrated feature of the Saudi health care system and recent government efforts have focused on improving the performance and quality of such services in order to achieve its objectives. However, despite government reports and statistical data suggesting adequate progress,[42] there is a growing body of anecdotal evidence suggesting that primary health care services are underutilised and lack public acceptance and support.[57,58] A possible explanation for these optimistic reports is that most

governmental evaluation of services is conducted by officials and technocrats who work for the government.

Studies conducted in this way are open to criticism on at least two accounts.[22] First, technocratics are less likely to publish findings that might be viewed as open criticism of the government. Second, technocrats are more likely to favour their colleagues' views; hence services will be prioritised accordingly, which may not necessarily reflect the views of the users of the services. Most studies carried out in Saudi Arabia have neglected the importance of a pluralistic evaluation of health care services.[50,69,72-76] The very few studies that have been carried out in military settings to examine patients' views on health care services have focused exclusively on patients' satisfaction research at the hospital care level.[57]

There are therefore compelling reasons for carrying out a study that addresses and synthesises the views of patients and key health care informants on primary health care services and provides scientific evidence to identify patients' needs. Moreover, this would appear to be the first study of its kind to embark on an in-depth analysis of patients' views on the quality of primary health care services in Saudi Arabia.

1.7. SIGNIFICANCE OF THE STUDY

This study, it is believed, will make a significant contribution to the body of existing literature for the following reasons:

- Patients' views on primary health care quality are neglected in the Security Forces Sector in Saudi Arabia.
- The study applies rigorous methods that are particularly sensitive to eliciting patients' views on quality. It appears to be the first study in the Saudi Arabian health care setting to take a sequential and concurrent mixed-method approach.

- Information elicited from managers and doctors and salient patients' views on quality are important since they provide an opportunity for doctors and medical students to improve their relationship with patients.
- The study provides a scientific reference for health care policy makers and managers in their pursuit of services' improvement.

1.8. SUMMARY

This introductory chapter has presented the structure of this thesis and a detailed account of the study setting. It has defined the study rationale and stated the research problem. The following chapters will develop the topics discussed. The next chapter will embark on a literature review, exploring the concept and definition of primary health care.

The following section briefly describes the literature search strategy adopted in this study.

1.9. LITERATURE SEARCH STRATEGY

In order to embark on an effective and time efficient literature search, the researcher utilised resources,[77] skills and experience acquired through attending classes and seminars, as well as direct support and help from librarians and other postgraduate students. As a result, a systematic strategy was developed which included the following steps:

1. Major databases related to the topic were searched, including Medline, ZETOC, PsycINFO, EBSCO, Web of Knowledge, Science Direct, Synergy abstracts, and Thesis abstracts. The JSTOR database was also searched for archives and old publications. The search strategy included an index search (MeSH) using subject headings such as (in individual and combined format) "developing countries", "Saudi Arabia", "quality

evaluation", "patients' views", "patient satisfaction", "health care evaluation", and "primary health care, UK".

2. A review was undertaken of the contents lists of leading journals in the field from 1990 to 2005, such as *The BMJ, Lancet, Emerald Journal, Quality & Safety in Health Care Journal, Family Practice International Journal, Journal of Health Service Research and Policy, RCGP Journal, JAMA Journals,* and the *Saudi Medical Journal. .*

3. The study built up an automated reference database using Reference Manager 11.0 Software.

CHAPTER 2. PRIMARY HEALTH CARE, A REVIEW OF THE LITERATURE

2.1. INTRODUCTION

The aim of this chapter is to provide background and context for understanding the way the current Saudi Arabian primary health care system is organised. What the analysis suggests is that primary health policies are influenced by a range of different forces, including the development of the World Health Organisation (WHO) Primary Health Care (PHC) approach (which is discussed in some detail), and also influenced by other factors, not least the model of primary health care imported from Western countries. Hence, economic and political decisions about primary care in Saudi Arabia draw not only on the WHO concept of PHC but also on Western systems of primary health care. This is because Saudi Arabia has a much wealthier economy than that of the third world countries for which the WHO concept of PHC was mainly designed.

This chapter commences by discussing what the PHC model is, how it has developed and influenced Saudi Arabia, and what are its principles and strategies of delivery. As Saudi Arabia has also imported systems of health care from Western Europe (e.g. the NHS type of gatekeeping system, catchment areas and registration with GPs), the development of the NHS model of primary care will be discussed briefly. Similarities and differences between PHC as it is understood internationally, and primary care from the Western perspective, are also explored. The chapter concludes by discussing the future of PHC and efforts to improve its performance and quality.

2.2. HISTORICAL BACKGROUND TO PHC DEVELOPMENT

In the era preceding the emergence of PHC, around 80% of rural communities in most developing countries had no access to treatment facilities.[78] This lack of access prevented any improvements in the high rates of mortality and morbidity.[79,80] Although efforts have continued to improve the health care status in these countries, some commentators, such as John and Taylor, claim the generic motive that steered the strong determination to implement new health care strategies was their independence from colonialism.[81] Walt and Vaughan point to five main factors contributing to the emergence of PHC: firstly, changing theories about development; secondly, increasing concern about population growth; thirdly, a growing trend to move away from technological medical solutions to more concern with socially accepted care; fourthly, the growing need to provide community-based basic health care services with emphasis on community involvement; and, lastly, the direct influence of the WHO to implement PHC programmes.[82] These factors are discussed below.

Changing theories of development

Walt and Vaughan argue that theories about development[a] changed because the common notion that development is correlated with economic and industrial growth was seriously challenged.[82] Macdonald similarly indicates that the belief that development with economic growth would 'trickle down' from the rich to the poor was disputed.[33] Rather, conceptualising development through the lens of modernisation and capital wealth would only profit a few, leaving the largest proportion of people deprived. Walt and Vaughan assert, firstly, that it is

---

a The term development is difficult to define. Although it might mean for some people 'positive change' it may mean disruption for others.[83] It is generally accepted that it reflects the "process through which the potentiality of an object or organism is released, until it reaches its natural, complete, full-fledged form" (Sachs,p.8[84]). It is also important to note that the term development involves a wide array of activities and cannot be reduced to economic growth. For more discussion on the debate, see Sachs.[84]

politically unacceptable to rely on a development theory that contributes to a serious rift in the community, by widening the gap between those who can afford health and those who cannot, and, secondly, that rapid growth of population with limited resources might trigger political instability and social unrest.[82]

Failure of old health care systems

The third factor is the increasing concern to move away from technological care towards socially accepted care. In fact, this factor is viewed as second in importance after changing theories of development for the emergence of PHC. Development theory implies that a state embarks on modernisation and industrial orientation that eventually will lead to economic growth and prosperity. Thus, development implies following the path of other 'developed' nations.[33] Within this framework, health care systems in developing nations are modelled on those of developed counties, not only in terms of structure and reliance on advanced technology, but also to the same level of specialised care, operated and dominated by highly trained medical professionals. Macdonald suggests that the Western model of health care 'exported' to developing countries, mainly by colonialism, has until now been very powerful and dominant, leaving no room for patients to easily question the decisions of doctors. He further argues that in the Western model, not only are health care professionals "above questioning", but the medical system and its policies are also unaccountable and beyond criticism[a]. Macdonald states, "in health service development, what has happened has been often total outward rejection of all traditional therapies and the proliferation of provisions based on a Western

---

a Macdonald gives an example of the power that health systems built on Western model principles can pose, even to politicians or political parties. In 1990, the President of Bangladesh proposed adopting a new health care system offering more flexibility and the participation of all communities. The powerful medical profession lobby rejected this idea and played a major role in the downfall of that president and his government.[33]

medical technical culture, with no real attempt to match these to the major health needs of developing countries" (Macdonald, p.14[33]).

Those sceptical of health care systems modelled on Western medicine usually put forward two main criticisms.[33,78,81,82,85-88] First, conventional medicine is a centralised approach, where most of the resources allocated to health services are spent on curative approaches rather than on prevention. This way of spending national revenue (which is likely to be limited in developing countries) on secondary or tertiary levels of care, not only causes depletion of resources but also deprives needy people of the services they urgently need. Thus, it is inevitable that hundred of millions around the world are denied access to health services in their own countries. In some cases, these services are not accessible because of the unfair distribution network of health care services, or because sometimes they do not exist at all. Indeed, issues like poverty, malnutrition, and natural disasters, play a major role in the high rate of mortality and morbidity in developing countries, but their health care systems must still accept some responsibility for not adopting appropriate health care models for their communities (i.e. affordable, culturally acceptable). People sometimes do not need a consultant to treat them for dehydration problems, rather, they need the right equipment with some basic instruction from a community doctor, who is aware of their problems.

The second criticism of conventional medicine is its embrace of a negative health definition, also known as the technocrat approach.[89,90]According to Baggott,[91] the negative approach is closely linked with the orthodox view, that individuals are regarded as being healthy when not suffering from any illness or disease, since health can often be restored by medical intervention.[89] The orthodox view perceives the concept of illness in a different way from the concept of disease. Disease relates to a biological order, diagnosed by a doctor, whereas illness refers to both the personal experience of disease and its wider social implications.

In contrast, the WHO defines health as " a state of complete physical, mental and social wellbeing, and not merely the absence of disease or infirmity".[92] The

WHO's definition is characterised as the 'positive approach' to health because it regards a person's health status as an ability or asset to be possessed.[32] The negative definition of health does not necessarily reflect everybody's perspective on health, particularly lay people who have their own views and metaphors about health and illness.[93] For instance, according to Balint, [94] a doctor defines a normal patient as one who has a complete absence of measured pathological symptoms, whereas, from the lay perspective, a patient can consider himself/ herself normal even when s(he) has a biological disorder, such as excessive weight or high cholesterol level.[95]

It is obvious, therefore, that a doctor perceives illness in a completely different way from the patient and this can have a significant impact on health behaviour and treatment seeking. In this regard, Hall and Taylor observed "in places where people have access to services, cultural beliefs about illness mean these services are not being accessed"(Hall and Taylor, p.17[81]).

During the 1960s, many developing countries recognised that health care systems had become symbolic images because many people, particularly the poor, feared or thought they were not for them. In such countries, lay people when experiencing pain or abnormal functioning in their bodies or minds were likely to practise self-healing or consult traditional healers because they knew them and, perhaps more importantly, because they trusted them.

Green notes that before the emergence of PHC, some countries, such as the Sudan, Tanzania, and China, recognised the impact and seriousness of the cultural-gap between lay people and highly trained medical doctors. 'Bare foot doctors' in China provide an example of how the image of doctors changed from one of being total strangers to trusted and accepted members in the community.[85] Phillips and Verhasselt comment:

> *"The Chinese health system has attracted attention for its apparent focus on equitable socio-economic development, health service decentralisation, preventive measures, and mass participation. Particular attention was paid to the Chinese 'bare foot doctors' who not only extended basic health care to rural communities but were*

theoretically accountable to the populations they served"(Phillips and Verhasselt, p.183[86]).

Need for community involvement in health care

Modernisation and development theory discussed earlier not only had implications for the economy and health care systems but also affected the cultural values of countries. As Stone points out, the era preceding the emergence of PHC was dominated by the assumption that health problems for a nation would be easily solved by following the Westernised approach of dependence on knowledge and technology. Hence, local communities' role was seen as irrelevant in this process.[61] The WHO, however, emphasised the central role that local communities can play in health care. Community involvement became identified with health care development and its importance at the health of any PHC programme was recognised. Some thus began to view participation or involvement in the process of development not simply as a means to an end, but as an end in itself, a goal worth pursuing because of its 'intrinsic value'.[33] Hence, development was not viewed as equating with economic growth and adoption of Western technology alone; social development was also very important and participation was regarded as a key element in the process.

Macdonald comments " From a variety of ideological positions, a vocabulary of 'people-centred development' and people's participation' began to emerge"(Macdonald, p.87[33]). As a consequence, the concept and meaning of participation in health care began to be differently understood and interpreted.[96-61] Generally, there are three schools of thought on the theme and level of participation.[97] The first considers participation as a collective activity, whereby marginalised and powerless groups in the population are empowered to engage in decision-making and policymaking.

The second views participation through the provision of information and ongoing programmes of awareness raising and activities. The third school views participation as a ladder, with provision of information as the first step on the ladder and empowerment on the top step.[97] Community participation is

discussed further in this chapter (see section 2.6.1), and chapter four (section 4.3) also discusses this issue in relation to patients' views.

The emergence of PHC

The last factor identified by Walt and Vaughan[82] is the significant role that the WHO and other international agencies, such as the United Nations' Children Fund (UNICEF), have played. The WHO has recognised that the health status of hundreds of millions of people is unacceptably low, and its improvement cannot be achieved simply by emphasis on expensive hospital care policies.[98] Health improvement, particularly in developing countries, can only be achieved if health care policies are seen as part of a wider developmental plan and by introducing "a fundamental change in the delivery of health care services in developing countries, with an emphasis on equity and access at affordable cost, and emphasising prevention while still providing appropriate curative services"(Hall and Taylor, p. 17[81]).

In 1978, the WHO and UNICEF at the Alma-Ata conference announced the blueprint for PHC (the Alma-Ata Declaration), endorsing and promoting it as a new approach in health care systems around the world.[33,85,86,89] Commenting on the conference, the WHO stated that the:

> *"health status of hundreds of millions of people in the world today is unacceptable, particularly in developing countries in view of the magnitude of health problems and the inadequate and inequitable distribution of health resources between and within countries. Believing that health is a fundamental human right and worldwide social goal, the Conference called for a new approach to health and health care. To close the gap between the "haves" and have-nots" the Conference considered primary health care to be essential care. Primary health care, as part of the comprehensive national health care system, goes a long way to achieving these fundamental health and social objectives.... Each country must interpret and adopt particular, detailed aspects of primary health care within the country's own social, political, and development context. All persons have the right and duty to participate individually and collectively in the planning and implementation of their health care"(WHO, pp.16-17[99]).*

The next section highlights the characteristics of PHC from the WHO perspective.

2.3. CHARACTERISTICS OF PHC: HOW DOES IT DIFFER FROM PRIMARY MEDICAL CARE?

> *"In recent years a great deal of confusion has been generated around the term "primary care" Everyone seems to understand what the term means but, unfortunately, concepts are very different, with varying implications for the appropriate organisation of health- care facilities"(Mechanic, p.351[100]).*

From the WHO's definition of PHC (see box 1a in figure 2.1) it can be seen that the essence of PHC does not differ from the first level of care widely understood before Alma-Ata. However, the distinction between PHC and previous philosophies is that PHC is predicated on the assumption that the aggregated sum for a population's improvement in health status is a result of a combination of many factors, of which health care is only one. In other words, PHC is seen within this context as a multi-function vehicle driven by the health care team, but in collaboration with other agencies, such as educational, agricultural, and even the military in countries where war is a threat to health. As indicated by Abel-Smith, "The central problem of development is how to meet the basic needs of the poor"(Abel-Smith, p.106[101]). Health is linked with education and literacy; income per-capita, safe water, sanitation and transport, etc. Thus, health care is equated with development, which makes the PHC view of health and its delivery much broader than that found in models of PHC programmes existing before Alma-Ata.

Primary care from a Western perspective is typically defined and related to issues such as the doctor-patient relationship. Within this framework, primary care can be provided by doctors (e.g. individual GPs) or as teams of doctors and nurses (e.g. General Practice or a Surgery). This has led some commentators, such as Safran,[102] to argue that primary care, at least for the last thirty years, has

been defined in relation to the characteristics of care itself and excluded the characteristics of care providers, their 'settings' and 'configuration'. For instance, the recent European General Practice/ Family Medicine[103] definition of primary care (see box 2a in figure 2.1) has emphasised two main aspects: science (e.g. evidence-based research, education), and clinical activities based on clinical specialty. The desire to change the image of primary care to one of sophistication equalling that of other levels of care, might explain the emphasis on strong scientific foundations. As indicated by Moore, "primary care has become the poor cousin, still part of the family but rather looked down on by scientists and specialists, as well as the public at large"(Moore, p.3[104]).

Comparing the European definition to the WHO's definition of PHC, it appears not to include the broader issues included in the WHO's definition, such as equality, a multisectoral approach, etc. Although the European definition includes community orientation as a core component, this concept is not equivalent to community participation as described by the WHO. Patient-centred care as identified by the European definition of health care is part of the growing trend towards health care consumerism, at least in Europe, as will be elaborated at a further stage in this thesis (see chapter 4, section 6).

Figure 2.1: WHO's definition and elements of PHC compared to the European definition of General Practice

European definition of General Practice/Family Medicine

Box (2a)

"General practice/family medicine is an academic and scientific discipline , with its own educational content, research, evidence base and clinical activity , and a clinical specialty oriented to primary care"

The Core Competencies of the General Practitioner/Family Doctor

Box (2 b)

- Primary care management
- Person-centred care
- Specific problem solving skills
- Comprehensive approach
- Community orientation
- Holistic modelling

Source: EURACT European definition of General Practice/Family Medicine. http://euract.org/html/pap04102shtml .Accessed on. 25-1-2005.

WHO definition of Primary Health Care (PHC)

Box (1 a)

"Essential health care based on practical , scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination. It forms an integral part both of the country's health system , of which it is the central function and main focus , and of the overall social and economic development of the community. It is the first level of contact of individuals , the family and community with the national health system bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process"

Elements of PHC

Box (1b)

- Education concerning prevailing health problems and the methods of preventing and controlling them
- Promotion of food supply and proper nutrition
- Provision of comprehensive maternal and child health care
- Immunisation of children against major communicable diseases
- Prevention and control of locally endemic diseases
- Provision of an adequate supply of safe water and basic sanitation
- Appropriate treatment of common diseases and injuries
- Provision of essential drugs

Source: World Health Organization , United Nations International Children's Emergency Fund . 1978, *Primary health care : report of the International Conference on Primary Health Care , Alma-Ata, USSR, 6-12 September 1978* Geneva : World Health Organization

2.3.1. Different perspectives on primary health care

Given the fact that PHC is perceived differently by different health care systems, it is important to identify areas of confusion in the meaning of PHC. When trying to define and characterise PHC as viewed by the WHO and primary care or general practice as known in the West, Tarimo and Webster[87] observed six common erroneous views (see box below):

- "PHC is only for poor people in developing countries, who cannot afford a real doctor"
- "PHC is a core set of health services programmes"
- "PHC is concerned only with rural areas, simple, low-tech interventions, and health care workers with limited knowledge and training, and is opposed to doctors, hospitals, and modern technology"
- "PHC is cheap "
- "PHC is only community-based health care"
- "PHC is the first level of contact of individuals and communication with the health system"

Adopted from: Tarimo and Webster (pp.6-7[87]):

The last two views in the above box are particularly important since they give rise to most of the pervasive confusion between PHC and primary care. Regarding the view that PHC is only community-based health care, Tarimo and Webster argue that PHC is not simply community-based health care, since looking at it solely from such a perspective would hinder the WHO's original goals of health for all, because confining it to just community based care would prevent focusing on other important developments, such as supporting health care structures and institutions (e.g. hospitals), and allocation of health care resources.[87]

With respect to the view that PHC is the first level of contact of individuals with the health care system, Tarimo and Webster contend that viewing PHC from this perspective is a misleading interpretation of the WHO's characterisation of PHC, since it misses its broader meaning and underlying principles.

They comment:

> *"The primary level of health care for many people in both developing and developed countries may be a physician, or nurse, or even a clinical specialist. However, the fact remains that to understand primary health care as principally the first level of health care is essentially to miss the broader meaning of primary health care and its underlying principles. This sense of the word is an anachronism, though it remains very useful in describing the organisation of the health system, and levels of referral within it. Perhaps a different term such as "primary medical care" or "primary care" should be used to describe the first level of contact, leaving the term "primary health care to be used as defined at Alma-Ata" (Tarimo and Webster, p.6[87]).*

Further, referring to the ideology of PHC in Western (Europe and North America), Macdonald states:

> *"In Western countries,.... there is almost total ignorance about Primary Health Care on the part of health planners and health workers. This ignorance extends to both the meaning of the concept and examples of its practice. Many people have chosen to believe that Primary Health Care is to be equated with primary medical care. This is not the case and such ignorance cannot be allowed"(Macdonald, p.13[33]).*

Ignorance of the meaning of PHC referred to by Macdonald can be seen in the many attempts to define PHC. For instance, the Committee on the Future of Primary Care in America produced a book about Primary Care without making any reference to PHC as presented by the WHO.[105] In this regard, Coombes remarked: "PHC is used synonymously in the United Kingdom with primary medical care or community-based care, and is often referred to as 'primary care'. But PHC in the international context involves much more than simply the provision of primary care services"(Coombes, p.209[88]).

Indeed, if we compare PHC to primary care based on the Western model, we see that some developed countries, like the USA and the UK, have adopted only some aspects of PHC, neglecting other important principles, for example, socially driven PHC.[71,85] In this regard, Twinn refers to the 'team approach'. She states, "In the UK, although primary health care was established in 1945, it was not until the late 1990s that the emphasis began to move away from medical dominance

by General Practitioners to a culture acknowledging the contribution of other health care professionals to successful outcomes in primary health care"(Twinn, p.2[106]). In fact, there "has been an attempt to widen the focus of care to one that recognises and responds to the health needs of local communities and allows other health professionals to contribute to planning health care".

The WHO, aware of the growing importance of primary health care settings, organised another conference in 1996, known as the Ljubljana Charter,[107] to encourage the adoption of primary care as the basis of health care services. According to Starfield, "In recognition of the rising social and health inequities in almost all countries, the World Health Organisation adopted a set of principles (see below) with which to build the primary care base of health services. The European Community adopted these principles in 1996; they build on a long tradition of striving towards equity and "solidarity"[a] in most European nations" (Starfield, p.3[71]).

The Ljubljana Charter proposes that health care systems reforms need to be:

- Driven by values of human dignity, equity, solidarity, and professional ethics
- Targeted on protecting and promoting health
- Centred on people, allowing citizens to influence health services and take responsibility for their own health
- Focused on quality, including cost effectiveness
- Based on sustainable finances, to allow universal coverage and equitable access
- Oriented towards primary care

(Adapted from Starfield, p.3[71])

---

[a] "Solidarity is a new word in the vocabulary of British political culture. For more details see Ashcroft et al. (2000) "Solidarity, Society and the Welfare State in the United Kingdom". Health Care Analysis 8:377-394. Alternatively, for a European perspectives, see Trappenburg, M (2000) Lifestyle Solidarity in the Health Care System. Health Care Analysis 8: 65-75.

2.4. PRIMARY CARE IN THE BRITISH SETTING

The philosophy of primary care is not new in the UK. In fact, it was the UK which first made the distinction between the three existing levels of care: primary health centres, secondary health centres, and teaching hospitals (White Paper submitted by Lord Dawson of Penn in 1920).[71] Despite its long established history in the UK's health care system, however, primary care was not popular and much of the NHS's investment in its first 50 years was mainly directed at the higher levels of care.[16]

Prior to the 1990s, the primary care model in the UK consisted of general practices, community nursing services, community psychiatric services, and dental and optical services.[108] According to Irvine and Irvine, these services lacked co-ordination and were seen as a "rather messy and unsexy part of the service through which patients pass on their way to hospitals, or to which they return after specialist treatment" (Irvine and Irvine, p.3[108]). Further, as Lewis[109] indicated, there was also an overlap of function between general practice and community care within the British health care system, because both terms had existed for a number of years.[a]

In addition, as a result of weaknesses, drawbacks and limitations of the old general practitioners' system, the traditional style of GPs running PHC centres with individual contracts around the UK, was criticised for its failure to achieve National Health Service (NHS) goals, particularly those pertaining to reducing cost and generating cooperation between GPs and communities. These were major concerns for health care professionals and policymakers, and, as a result,

---

[a] In this regard, Starfield stated "historically, primary care has been defined by the type of physician providing it; even now it is common for it to be characterised as that which is provided by general practitioners (or family physicians). The problem with this characterisation is that the norm for primary care becomes that which describes the practices of family medicine. Since this may vary from place to place and country to country, a better alternative to specifying its functions is needed" (Starfield, p.19[71])

the government began increasingly to consider the need to embark upon radical change in this system.[108]

As discussed in earlier sections of this chapter (2.2), reasons for the UK reforming primary care differed from the WHO's approach to PHC, which emphasises the link between health and development. Issues of poverty and lack of health care coverage were not as important here as in developing countries, rather, issues such as the increasing cost of services (funded by taxation), an ageing population, the increasing prevalence of chronic degenerative diseases, were very important factors for the NHS to restate the importance of reforming and maintaining the primary care type of delivery.[108]

Another factor that forced a greater orientation towards primary care was development of the ideology of professionalism and changes in health care professionalism that had occurred over the previous three decades. First, professionals around the world started to become 'sub-specialists'. General physicians' (GPs') numbers in many countries decreased dramatically as a result of having to cope with and manage escalating advances in the medicine and health care technology fields, and the greater financial rewards to be gained from becoming specialists. The number of sub-specialists in some countries was greater than the number of GPs. Nevertheless, as Starfield has pointed out, specialty care often requires more resources than are required in primary care.[71] Health care economics writers like Maynard and Bloor[110] have also highlighted this fact in their assessment of primary care's potential cost effectiveness. In addition, despite the obvious advantages of specialty care, it alone is not enough to "produce highly effective basic care". [71,105]

Moreover, prevention of illness requires a broader perspective of health care promotion than can be achieved by specialty care. Further, the escalating costs of purchasing, deploying and maintaining advanced health care makes it unlikely that any country will continue to support specialty-oriented health care in the long term. Finally, expensive care is less accessible to some groups of the community, another of its disadvantages.

In its efforts to reorganise and coordinate primary care and secondary care,[108] in the mid 1990s,the Conservative government introduced new reforms to promote the concept of primary care, making general practice its basis.[108] The initiative aimed at increasing competition among GPs, with particular emphasis on community involvement. However, the benefits achieved were not sufficient to justify the higher cost. The Labour government carried on the mission to provide communities with high-quality health care services at reasonable expense.[111] It launched a new scheme in 1997 which led to the demise of the former GPs' fundholding scheme and introduced the idea of Primary Care Groups (PCGs) and Primary Care Trusts (PCTs), funded by the NHS directly and health care professionals' salaries paid by the NHS.

Currently, primary health care initiatives in the UK aim to achieve several goals. First, to be the first level of contact with patients and to co-ordinate with higher care by performing the gatekeeping function in order to reduce the number of patients seen by consultants in specialist hospitals and tertiary level services. The gatekeeping function implies that patients do not visit specialists without a referral based on the primary care doctor's judgement. This function of primary care has received mixed reactions in the literature. While one group justifies the gatekeeping role as legitimate in reducing costs (specialists usually require more expensive tests and procedures), others express concerns about it, particularly its potential threat to limit free choice and patients' rights.[112,113] Starfield argues, "A reasonable compromise might be to ensure free choice of primary-care personnel to permit choice of specialists for referral"(Starfield, p.1131[112]). Recently, the British government appears to have taken measures in support of this. Appleby indicated that by 2008, patients requiring referral "will have the choice of any NHS or private provider, or any one of the new treatment centres that are often run as public-private enterprises"(Appleby, p. 61[114]). Currently, patients are allowed to go to hospitals directly only in emergencies.

The second goal is to provide continuous community-based services at relatively low cost, and lastly, to reduce inequality of access to health care services without affecting the quality of services.

These goals remain almost the same, but changes have been made in the techniques of operating PHC. Bosanquet and Salisbury (p.62[115]) have observed that the era from the 1990s onwards has witnessed the most dramatic improvements in general practice. A survey of general practice between 1986-1992 shows that improvements achieved in these five years in terms of staffing and expansion of buildings were almost equal to what had been achieved in the previous twenty-five years.

2.5. STRATEGIES FOR PHC DELIVERY

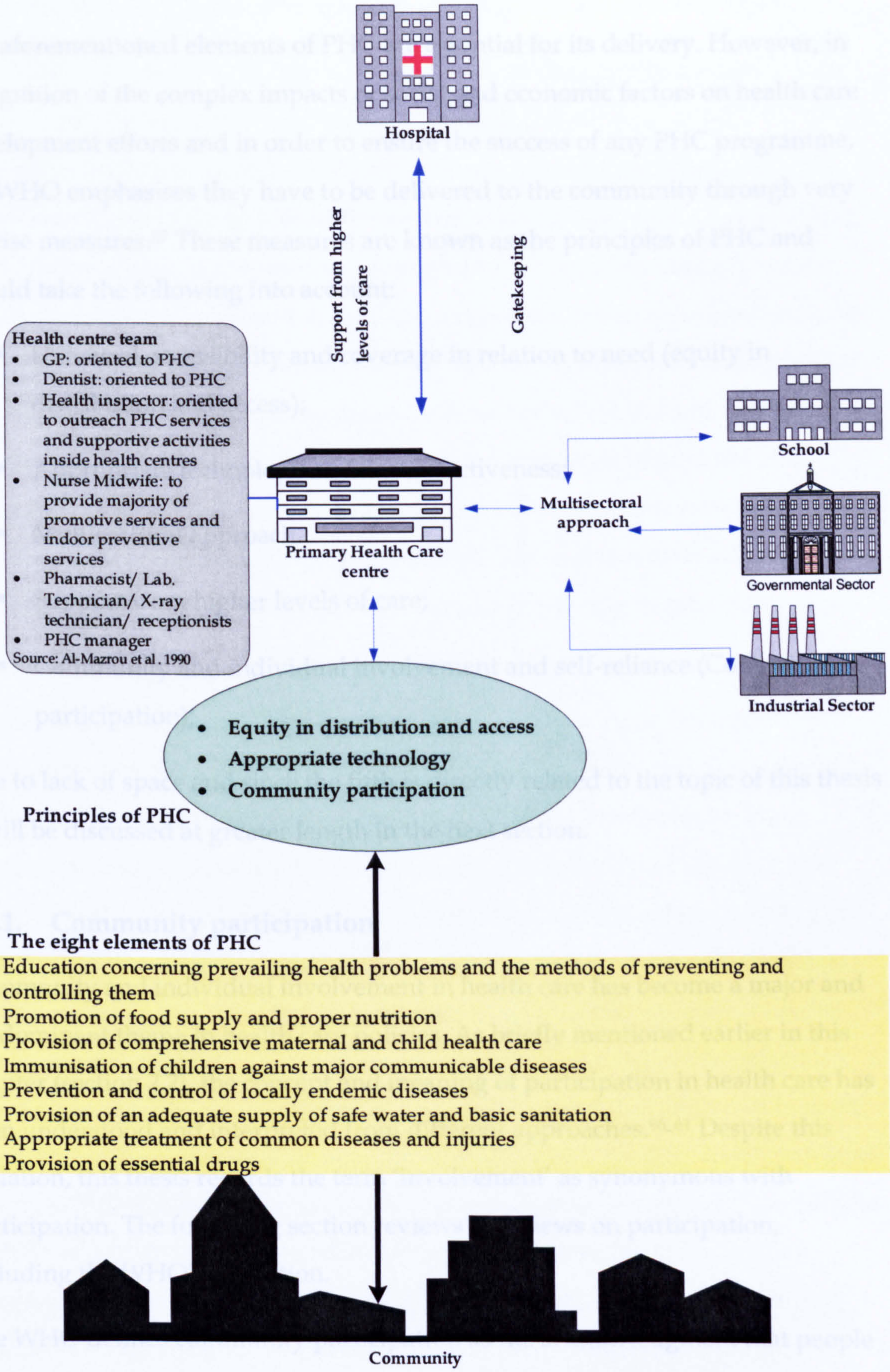
The WHO emphasises that PHC as a concept and instrument in the delivery of health care is equally valid for all countries, either developed or less developed; however, its form in them may vary. Hence, the package of PHC services contains promotive, preventive, and curative service components, which are described as its eight elements. The PHC elements listed in figure 2.2 are a detailed description of 'how' PHC should be delivered at the local and national level. From the figure it can be seen that the elements numbered 1-3 are preventive services. The elements numbered 4-6 focus on curative care. The eight elements are nevertheless linked to and dependent on each other and their implementation as a complete package is essential.

The details of delivery of each element will depend on the actual priority of community needs. This is known as the comprehensive or selective PHC approach. Despite their advantages, PHC programmes have limitations and encounter difficulties. The WHO had wanted all developing countries to apply all PHC elements (comprehensive PHC) at the same time. But a couple of years after the Alma-Ata Declaration, it was realised that this goal was too ambitious, at least for very poor countries, and the task had to be narrowed to form what is

now known as selective PHC, where each country has to decide which elements of PHC are deemed necessary.[85] The WHO's shifting support from comprehensive to disease-focused selective PHC[116] has triggered a heated debate among scholars (see Unger and Killingsworth;[117] Walsh and Warren; Coombes (p.212[88]) ; Taylor and Jolly, p.971[118]), and for a critique of the WHO's overall policies and motivation for introducing PHC, see Vicente Navarro [119-121] This chapter does not intend to elaborate in depth on this issue but it is deemed sufficiently important to be mentioned in the present consideration of PHC principles.

As previously indicated, each country has different views of the concept of PHC, and to what extent primary care should be implemented, notwithstanding, the importance of PHC as a comprehensive approach has once again surfaced. Although poorer countries in many parts of the world still struggle to achieve the underlying principles of PHC, Saudi Arabia and members of the WHO's Regional Office for the Eastern Mediterranean have adopted the comprehensive version of PHC.[59]

Figure 2.2: Strategies for PHC delivery



2.6. PRINCIPLES OF PHC

The aforementioned elements of PHC are essential for its delivery. However, in recognition of the complex impacts of social and economic factors on health care development efforts and in order to ensure the success of any PHC programme, the WHO emphasises they have to be delivered to the community through very precise measures.[87] These measures are known as the principles of PHC and should take the following into account:

- Universal accessibility and coverage in relation to need (equity in distribution and access);
- Appropriate technology and cost-effectiveness;
- Multisectoral approach
- Support from higher levels of care;
- Community and individual involvement and self-reliance (Community participation);

Due to lack of space and since the fifth is directly related to the topic of this thesis it will be discussed at greater length in the next section.

2.6.1. Community participation

Community and individual involvement in health care has become a major and predominant theme in health care policies. As briefly mentioned earlier in this chapter (section 2.2), the concept and meaning of participation in health care has been understood and interpreted from different approaches.[96-61] Despite this variation, this thesis regards the term 'involvement' as synonymous with participation. The following section reviews key views on participation, including the WHO's definition.

The WHO defines community participation as the acknowledgment that people have the right and duty to participate in the process for the improvement and maintenance of their health. Community self-reliance and social awareness are

among the key factors in human development (WHO, p.23[99]). Thus, community involvement in health care is seen by the WHO as both a 'duty' and 'right'.

Community involvement is seen as a '*duty*' because community members' have responsibility for their own health (e.g. maintaining healthy lifestyles, compliance with treatments). Al-Mazrou identifies specific measures that individuals should take to protect themselves from disease, such as maintaining good antenatal care, breast-feeding, giving-up smoking, maintaining personal hygiene, avoiding alcohol and drug abuse, proper sanitation and water use, and proper food storage.[122] Individual self-responsibility is potentially important for PHC strategies, particularly in terms of treatment effectiveness and cost-effectiveness.[87,123,124] Therefore, the WHO argues that participation not only conveys a sense of freedom and independence, but participants have obligations, such as self-awareness and responsibility. PHC is also responsible for raising awareness and involvement by introducing and promoting its aims and objectives to the community.[87]

On the other hand, community involvement is seen as a '*right*' because it has a political dimension and is predicated on the belief that the better the democratic system in a country, the higher the level of community involvement. Thus, community involvement is important in relation to two related domains: the development process, and democracy. As previously indicated (section 2.2), it had become increasingly clear that the task of development not only "acted as a brake on economic growth but also did little to solve the basic causes of social and political instability".[33] Consequently, involvement in the development process came to be seen not simply as a means to an end, but as an end in itself, as a goal worth pursuing because of its 'intrinsic value'. People's involvement as active participants in society's activities has largely been viewed as a component of all development strategies and a safeguard against social and political instability. Powerful countries like the USA have been pressuring developing nations to widen community participation[33] as an important measure for international stability.

Community involvement is also seen as a remedy for democratic deficits and hence a necessary complement for inadequate representation in decision-making.[125,126] Other commentators argue that the recent emphasis in the West to involve patients in their health is mainly due to: (i) the need to democratise health care services, particularly to mitigate health care professionals' growing power and dominance; (ii) and the trend towards treating patients as consumers.[19,127]

Although there is no unified form of participation, the most important kinds of participation identified in the literature are: participation in implementation, participation in benefits, participation in evaluation, and participation in decision-making.[33] Macdonald asserted that participation in decision making and evaluation are the least common but most significantly important kinds of participation because "people have the opportunity to feel as though they are the 'owners' of what is going on rather than remaining in the role of mere recipients of programmes designed for them" (Macdonald, p.90[33]).

2.7. PHC IN SAUDI ARABIA

In our analysis of the Saudi approach to primary care, we found it to be influenced by both WHO and NHS philosophies of primary care. For instance, the circumstances of the primary level of care in Saudi prior to the introduction of PHC, were similar to those in the UK. Primary level care did exist, through a number of 'health offices', maternal and child care centres, and epidemic outbreak control offices which ran vertical programmes for malaria, tuberculosis, schistosomiasis, etc.[45] However, because of the influence of the medical profession and other factors, not least, the lack of health care planners, most governmental funds were directed to hospital care.

The political decision to reform primary care in the UK was mainly an internal initiative (although it may also have been influenced by new international initiatives, e.g. the Ljubljana Charter). On the other hand, the role of the WHO is

far more influential in developing countries, such as Saudi Arabia, for many reasons, i.e. the lack of advanced level of health care research and health care expertise and resources. As a result, Saudi Arabia is one of the signatory members of the WHO PHC imitative. In 1980, a ministerial decree (No. 257/1459/50, dated 17/8/1400H- 1980AC[45]) announced the official adoption of the WHO philosophy of PHC, and primary health care facilities (e.g. health offices, epidemic outbreak control offices) were united under one PHC programme.

Although the official PHC strategy in Saudi Arabia is derived from the WHO, the NHS type of primary care also has some relevance to the Saudi primary care system as PHC centres in the country function as a gatekeeping system to higher care, and each PHC centre serves a catchment area. To address changes in mortality and morbidity patterns, Saudi Arabia has also added new aspects to the original PHC programmes introduced by the WHO, such as establishing mini clinics for chronic diseases. These are mainly imported from the Western model of primary care.

In addition, one of the major reasons for implementing PHC was the escalating cost of health care services and the intention to move from costly specialised care to a more comprehensive but basic level of care. After 25 years, this objective seems to have been achieved as indicated by Al-Yousuf et al.:

> *"The emphasis on a PHC approach has resulted in a relative decline in the number of more costly outpatient visits to hospitals throughout the Kingdom. The registration of families and individuals in a single health centre has also helped to prevent duplication of consultations. The use of the essential drugs list and documentation of prescriptions in patient files has not only reduced expenditure on pharmaceuticals, but also improved prescription and medication practices. The comprehensive services provided by PHCs have reduced the overall cost of care"(Al-Yousuf et al., p.651[45]).*

2.8. IMPROVEMENTS IN PHC

The WHO acknowledges that PHC has been a successful idea and should continue to be an integrated and central component in developing countries' health care systems. The WHO also realises that the last two decades have witnessed profound political and economic changes, such as the growing trend of transformation from government planned economies to market oriented economies, reduction of state intervention in the national economy, decline of state control, and the movement towards decentralisation.[5] As a consequence, the WHO sees the way forward as embarking on radical reforms to shift the focus of PHC programmes from "all possible care for everyone, or only the simplest and most basic care for the poor, [to the] delivery to all of high-quality essential care, defined mostly by criteria of effectiveness, cost and social acceptability"(WHO, p. xii[5]). The WHO emphasises this can be achieved by focusing on improving performance and greater responsiveness strategies.[5]

Further, many commentators, such as Irvine and Irvine, argue that for primary care to be a well-established and reliable type of care, it has to:

- "Provide a range of high quality personal health services in the community which *people need and want*, provided that resources are available"
- "Evolve a professional attitude, skills and ways of working that result in effective and efficient care for patients which people value"
- "Achieve improvements in the health status of the practice population"
- "Give value for money"

Adopted from Irvine and Irvine (p.4[108]).

At this stage, the WHO has renewed its emphasis on consulting patients in health care. The WHO stresses that improving and maintaining health services' performance must be centred on responsiveness and viewing patients as 'consumers'. The WHO's report on health responsiveness, published in 2000,

indicates that many countries around the world, including Saudi Arabia, need to review their health policy plans, particularly those related to responsiveness to patients.[5]

The report, which included 191 countries, rated Saudi Arabia 67th regarding its health policy plans, and responsiveness to patients. Publication of this report, while attracting some debate,[128,129] has also put more pressure on governments to improve their health services, particularly at the PHC level. Although Saudi Arabia has expended some efforts in developing the WHO's original PHC programmes to respond to changes in the mortality and morbidity patterns of the population[a], it is not clear what has been done to respond to the WHO's proposal to view patients as consumers and consumerise health services. Further, due to lack of scientific research on this area in the country, it is not clear to what extent patients' views are sought when planning and evaluating PHC services.

Quality is a multidimensional notion.[130,131] Thus, a pluralistic approach towards defining and evaluating quality is essential for understanding the role of quality in health care provision.[31,132] Managers and health professionals, such as doctors, may have agendas and views that differ from those of patients. Ignoring patients' views on priorities of care contributes towards their increasing dissatisfaction, and the decreased efficacy and cost-effectiveness of health care policies.[19] This thesis will examine the concept of quality and patients' views at greater length in the following two chapters.

2.9. SUMMARY

This chapter has summarised the differing primary care initiatives of the WHO and NHS type, and how these initiatives have influenced Saudi PHC policies. Saudi Arabia has the advantage of being a rich country, and hence has developed

---

[a] Information revealed by a policy maker during an interview in August 2003.

a PHC network (both in the military and general public sectors). Currently, the focus is shifting from the number of PHC centres to improving their provision of quality of care. Improving quality of PHC is important, but how this improvement is made, and who should be involved in this process are also crucial issues. The next chapter will explore quality assurance initiatives in primary care.

CHAPTER 3. THE CONCEPT OF QUALITY IN HEALTH CARE: A REVIEW OF THE LITERATURE

3.1. INTRODUCTION

The previous chapter discussed the emergence of interest in the quality of health care provision, and concluded that PHC is still a valued component of health care systems in many countries, capable of providing basic curative and preventive health care services for the whole population. However, because political, economic, and sociodemographic situations have changed since the introduction of PHC programmes, policy reforms now aim at improving performance, increasing responsiveness, and ensuring quality.[133,134]

This chapter examines the issue of quality further and reviews past and recent debates on quality in health care. It commences with a brief background to quality assurance development and describes how quality control has developed from being merely implicit in health care services goals, to becoming an explicit management-driven initiative in health care services.

Since their wide proliferation in the 1980s, quality assurance programmes in health care services have been faced with various challenges, in particular, the lack of a unified definition of quality.[135] This is because quality is multidimensional, and different health care stakeholders (patients, doctors, managers) view and evaluate quality from different perspectives.[31] Hence, it is increasingly recognised that patients' views on quality, alongside those of other stakeholders, are very important in any quality initiative.

Recent developments in health care policy in the UK show a synthesis of the views of different stakeholders, with increasing emphasis on the views of patients.[35,136,137] Thus, the traditional professional-centred evaluation of service quality is being replaced by one which is pluralistic.

The UK experience is discussed in detail. This is because it is well documented and, more importantly, has developed beyond the 1980s when the concept of quality assurance emerged as a potential tool for providing better services to patients and also because of its possible relevance for future development of the Saudi system.

Due to lack of space and time, no attempt is made to cover all aspects and ideologies related to quality as it is variously perceived by providers, professionals and patients, since this would be difficult for many reasons, for example, the definition of quality is problematic and still very much debated.

The chapter is divided into eight sections. After this introduction, the second section examines the historical development of quality assurance, with particular reference to health care. The third section attempts to define quality, and the fourth section discusses methods of evaluating and measuring quality. The fifth section explores different perspectives of quality in health care, and the sixth reviews quality of care development in Saudi Arabia. The seventh section examines quality of care specifically in relation to PHC, while the final section summarises the chapter's contents.

3.2. HISTORICAL BACKGROUND TO THE QUALITY MOVEMENT

Although the control of quality in products or services has long been a goal in human endeavour, it is hard to pinpoint its beginning. Quality historians, such as Racine, point out discrepancies in the literature concerning the actual start of quality assurance development in health care.[138] According to Racine historians give time spans ranging from 30 to 300 years ago. Historians who subscribe to the industrial tradition go further back and contend that quality development is as old as the human race. Discrepancies between scholars from the industrial tradition and health care tradition arise from the fact that "most historians in health care define quality assurance as the formal and systematic evaluation of

health care, which they associate with the activities of the last half of the twentieth century"(Racine, p.16[138]). Ellis and Whittington dispute this and state that " its gestation has a much longer history" (Ellis and Whittington, p.9[139]).

They classify the development of interest in quality into three historical stages: an *embryonic stage*, an *emergent stage*, and a *mandatory stage*.[139] These stages are briefly outlined below:

3.2.1. The embryonic and emergent stages

Ellis and Whittington refer to primitive efforts to assure quality of services and products (without explicit reference to the term "quality assurance"), which can be traced as far back as the Babylonian King Hamurabi [a], who used physical punishment to impose 'quality standards', especially in architecture. [140,142]

However, it was not until the 19th century, with the scientific revolution, that pursuit of quality, with something approaching its modern meaning, started to emerge. According to Sale;[140] John Howard and Elizabeth Fry were the first to report their observations of quality of care provided by nurses in the hospitals they visited. In the mid-nineteenth century, Florence Nightingale [b], the famous British nurse during the European Crimean War, is believed to have been the first to introduce the idea of 'performance measurement and improvement of processes'.[142,144,145]

In America, in 1920, Abraham Flexnor presented a report that emphasised 'structural criteria' (i.e. building standard, professional qualification, etc.) and the

---

[a] Under King Hamurabi's law, designers or members of their families would face the death penalty if the building they had constructed collapsed. These laws aimed to impose a higher degree of architectural quality.[140] Other groups of people, like doctors, were also subjected to physical penalties if mistakes occurred during their work. The Romans are also reported to have expressed a keen interest in the quality of health care received in their military hospitals.[141]

[b] Nightingale is regarded as the first to write about quality criteria in nursing, comparing weaknesses and strengths of the health care system in order to improve health care outcomes.[140] She argued that adequate nursing care could save soldiers from wound complications and reduce the mortality rate. In this sense, she foreshadowed later concerns about health care quality assurance.[143] Attempts were also made not only to improve direct health concerns but to include broader aspects, such as environmental factors.

important link between physicians' education and quality of care. His report was widely welcomed by many US health authorities, and led to the forced closure of many medical schools whose services failed to comply with standard criteria. A number of professional associations sprang up in the USA as a result of this report. These were mainly involved in approving agencies or persons to practise in the health profession, licensing health care departments and schools, and arranging for board exams.[146]

In the UK, similar activities were carried out by the Royal Colleges (e.g. inspections of units, wards) to ensure that the quality of medical facilities was appropriate for medical students.[139]

However, the period from the 1920s to 1950s saw little progress in quality health care research.[140,142,147] Egdahl and Gertman suggest this may have been due to:

> *"the placebo nature of medicine in the pre-antibiotic era. In that era, the choice of technique or procedure made little difference to most diseases, since virtually all therapies were essentially placebos that produced neither harm nor benefit" (Egdahl and Gertman, p. 7[147])*

It could also be attributed to the two World Wars, or perhaps the worldwide economic depression during this period.

From the 1980 onwards, however, quality assurance started once again to appear high on the health care agenda at both national and international levels. Since the 1980s, the WHO through its regional offices has played a central role in promoting the concept of quality assurance in health care at the international level, and published its first monograph on the concepts and methodology of quality assurance in health care in 1982.[148]

Many countries also started to take practical steps to manifest the concept of quality assurance in their health care systems. For instance, in 1983, the British Royal College of General Practitioners (RCGP) launched quality initiatives in the

UK, which were followed in 1984 by similar initiatives initiated by the King's Fund.[139]

Most quality assurance initiatives that emerged during the second half of the twentieth century and up to the 1980s differed from those in the embryonic stage due to the "explication and systematisation of methods of setting, apprising and maintaining standards"(Ellis and Whittington, p.10[139]). However, their application was not mandatory, and, more importantly, not all health care professionals and politicians were convinced of their importance and some even saw them as just another fad.[139] The next section will explore how quality assurance developed from half-hearted individual initiatives to become a central theme in health care management and policy.

Table (3.1) presents a chronological history of quality assurance in health care from the embryonic stage when it lacked a unified concept and explicit standards, to the late 20th century when it emerged as a potential tool for providing better services for patients and providers. The table also highlights the 1980s, shift when quality assurance started to be perceived as a necessity rather than an optional choice.

Table 3.1: Selected Health Care Quality Milestones

- 2000 B.C. Egyptian papyri document state -of-the-art medical standards for practice.
- 1100 B.C. -Cho Dynasty requires physicians to pass a state examination before entering practice and determines physician competence and payment on the basis of patient outcome .
- A.D. 100-Roman Emperor Antoninus Pius issues an edict that requires credentialing by physicians , uniform standards of practice, and uniform geographical distribution.
- A.D. 1000-Caliph al-Muqtadir of Persia requires , for the first time , that all medical practitioners have their knowledge examined .
- 1500s Royal College of Physicians in England establishes itself for medical licensing and professional self - regulation.
- 1760s New York State enacts the first exclusive licensure act which provides that no one practise medicine or surgery without being examined or licensed by a government -appointed board of examiners .
- 1850s Medical Care Act in England promulgates government standards for the training and registration of medical practitioners.
- 1910s American College of Surgeons develops the Hospital Standardisation Programme and promotes standards, on-site surveys, and evaluation for accreditation of hospital academic programmes .
- 1950s Joint Commission for Accreditation of Hospitals (JCAH) establishes itself to improve and promote the voluntary accreditation of hospitals.
- 1960s Social Security amendments to Medical and Medicaid require accreditation hospitals to establish utilisation review committees to examine admission criteria , length of stay, and treatment prescribed .
- Darling v. Charleston Community Memorial Hospital legal ruling establishes corporate liability and requires health care organisations to monitor and evaluate professional delivery of care .
- 1970s Professional Standard Review Organisation (PSRO) legislation establishes government-sponsored agencies to monitor cost , quality, and utilisation of hospital care for Medicare , Medicaid, and Maternal and Child Health Programme patients.
- The Joint Commission creates the Performance Evolution Procedure for Auditing and Improving Patient Care and establishes an audit requirement with a specified number of audits to be performed .
- American Hospital Association (AHA) approves "A Patient's Bill of Rights" which includes rights to informed consent and to considerate and respectful care .
- The Joint Commission replaces diagnosis-specific medical audits with new quality assurance standards that create a comprehensive programme of problem -focused reviews.
- 1980s Peer Review Organisations (PROs) replace PSROs to monitor quality of hospital care and appropriateness of admission.
- The Joint Commission replaces the problem -focused approach with requirements for systematic monitoring of important aspects of patient care .
- The Joint Commission expands its mission and changes its name to the Joint Commission on the Accreditation of Health Care Organisations .
- The Joint Commission announces its agenda for changes to emphasise outcomes over structure and process, and to develop a national comparative database.
- Release of hospital mortality statistics by the Health Care Financing Administration (HCFA).
- John Hartford Foundation and Harvard Community Health Plans sponsor national demonstration project on quality improvement in health care to determine if industrial TQM can be applied to health care.
- Agency for Health Policy and Research (AHPR) initiates a Medical Treatment Effectiveness Programme to examine effects of variations in health care practices on patient outcomes and to develop and disseminate clinical guidelines.
- Pennsylvania and New York state release performance data on individual hospitals and physicians and other states establish data commissions to collect patient -care data.
- 1990s The Joint Commission replaces quality assurance with quality assessment and improvement.
- AHPR issues the first government -sponsored medical practice guidelines.
- Health reform bills propose performance reporting and the managed competition of health plans on the basis of cost and quality.

Source: Racine (p.27[138])

3.2.2. The mandatory stage

Although quality assurance programmes started in the private industrial sector during the 1950s,[139] it took almost thirty years before they were applied in the public sector. Many commentators have attempted to explain why it took public organisations, such as health care, so long to adopt such potentially useful techniques. The decision to embrace quality assurance in health care has varied from one country to another and the analysis of the literature in this area shows no consensus among scholars on the exact events that led to its widespread pre-eminence. In Saudi Arabia, the MoH and other health care providers adopted quality assurance initiatives in the 1990s.[59] This decision was mainly influenced by the WHO[a], but also by the realisation that in order to sustain equitable and effective PHC services, a quality control initiative was essential.[122] As will be indicated later in this chapter, Saudi Arabia's experience of quality assurance programmes has not been thoroughly researched. The well -documented UK experience of quality assurance since the 1980s may therefore be useful to the Saudi system, as there are similarities between the health care systems of the two countries.

Donaldson examined the reasons why the NHS, for its first twenty years, had no specific agenda to ensure quality of health care.[135] He provided a number of reasons why quality assurance was felt to be implicit in health care services.

First, it was assumed that highly trained medical professionals, utilising clinical advances and cutting-edge technology, as they became available, would be the best way of providing high quality health care services.

---

[a] There are two large international organisations which promote an increasing awareness of quality assurance programmes at the international level. These are the WHO and the US Agency for International Development (USAID). Both organisations financially sponsor the implementation of quality assurance programmes in developing countries. This is done through either direct help by sending teams of quality experts to assess quality and its potential improvement,[149]or by arranging international conferences to enhance discussion, global promotion and dissemination of the concept of quality assurance. The conference on Assurance of Quality in Primary Health Care in Shanghai, China is a good example of this kind of activity.

Second, before Donabedian's famous triad of structure, process, and outcome, there was no clear conceptualisation of how quality assurance programmes, developed in commercial manufacturing, could be transferred to the public sector.[135]

Third, since the 1960s, a number of economic, social and environmental imperatives have emerged, putting pressure on health care providers to improve health care quality.[34] Ellis and Whittington, for example, highlight the noticeable increase during the 1990s of public demand for expensive health care, accompanied by a reduction in funds allocated to health services in many countries. They argue that such circumstances encouraged a debate on the relationship between cost and quality.[139] Further, together with an increase in health care costs, growing demand,[150,151] variations in the structure of health services and clinical practice' and in the pattern of care provided by professionals, other important factors, such as technological advances, and the rising expectation of an increasingly sophisticated public,[35] were seen as main drivers of change.

The above developments put enormous pressure on health care policymakers in many countries. Some countries, such as the UK, felt these challenges required major reform such as creating a *new* health care system. In the UK, up until the introduction of the new public management in the NHS in the 1980s, and the quasi-market in the early 1990s, it was assumed that good health structures and advanced medical facilities as well as highly-trained health care professionals would be sufficient to provide high quality care.[135]

Medical profession organisations, such as the RCGP and research institutions, such as the King's Fund, began to pursue quality initiatives by introducing self-regulation, clinical audit, peer review, and total quality management.[35,108,135,139]

These initiatives were, however, criticised on a number of grounds as indicated by Scally and Donaldson:

> *"Although the concept of peer review is well established in the United Kingdom, the implementation of clinical audit in the NHS is not a complete success. Concerns have focused on the failure of audit processes to detect and moderate significant clinical failures; on incomplete participation; on the lack of connection and flow of information to those responsible for managing services; on substantial declines in the amount of regional audit; and on the value for money for what amounts to a significant annual investment" (Scally and Donaldson, p.62[152]).*

Ellis and Whittington indicate that, "By the 1980s, governmental allusions to quality assurance for health care were edging towards prescription" (Ellis and Whittington, p.17[139]). Above all, politicians' interest in quality assurance initiatives was driven by the desire to increase efficiency and reduce expenditure. As Powell explains, since "it proved politically impossible to reduce NHS expenditure, the focus changed to maximising the output from expenditure....one objective of increasing efficiency was seen as largely attainable by injecting the NHS with the enterprise culture, consisting of the new managerialism plus a greater market orientation" (Powell, pp.73-74[153]).

In 1983, the British Conservative Government having adopted a free market approach to health reform, asked Roy Griffith, the Executive Director of the Sainsbury supermarket chain, to assess the management system of the NHS. The Griffith Report (DHSS 1983, cited in Powell, p.76[153]), was described as the single most important factors contributing to change in the NHS since it inception.[153,154] Developments following the Griffiths report have led to the emergence of the term the "New-NHS", based on the assumption that the enterprise culture (new managerial hierarchy, internal market competition) will increase efficiency and customer choice.[153] As a result, quality control has been taken over by managers. The Griffith report paved the way for wide proliferation of a market-style approach, central to which is customer satisfaction with a service or product.[23]

In the health care context, measuring performance is central to quality evaluation, which includes "acquisition of experience and perception" (Williams,

p, 509[23]) of service users, that is, the patients. Since negative views about the service will lead to poor performance measures, and since an explicit link between high quality and compliance is made, patient satisfaction began to be seen as a goal for health care providers.[16,23]

Under the UK Labour government from 1997, quality control re-emerged as a major issue with the Clinical Governance Initiative and the emphasis on clinical guidelines, because public confidence in the NHS had begun to decline after a series of service failures[136,137,155]: the Alderhay Children's Hospital scandal;[156] various cases involving patients left on trolleys as a result of hospitals under pressure from staff shortages and limited resources; various well-publicised emotive cases where young children died waiting for dialysis or organ transplants; and, more recently, the Bristol Royal Infirmary scandal,[157]and the case of Dr Shipman.[158] Moreover, in 1997, due to increased criticism of internal market initiatives, which were perceived as showing little evidence of improving organisational performance, and public distrust of 'commercial pressures',[135] the Labour Government introduced plans to replace the internal market initiatives. The ideology of competition was replaced by one of partnership and collaboration to improve quality.[135,137]

In 2000, the Labour Government set up "Modernisation Action Teams" (MATs), consisting of medical professionals, managers, and general public representatives. MATs are involved in six areas: partnership, performance, professionalism, prevention (health inequalities and preventing avoidable illness), patient care (ensuring fast access), and patient empowerment and information. Since the Griffiths report, the importance and value of patients' views on health care are increasingly recognised. Baggott notes that not only has the scale of patient surveys' increased, but their views are increasingly used as a measure of evaluating quality, as evidenced by the Commission on Healthcare Audit and Inspection (CHAI), which adopted a patient survey strategy for evaluating quality of care.[137]

Despite developments made in the field of quality assurance in the UK, there have been some sceptics who dismiss it as just a 'fad', or merely a tool that has been invented by managers to control health care professionals. In this regard, Kelly suggests that sceptics like Tudor Hart and Monks who point to managers' failures, undermine public faith in their strategies.[159] She goes further and argues that current quality strategies have been deliberately transformed by managers from the original interpretation of quality set by quality theorists like Deming and Juran, since they believe original quality interpretations based on 'expert' involvement are part of the problem, whereas they should be part of its solution. Thus, the current quality discourse almost 'proletarianises' professionals, rather than empowers them.[159]

Despite sceptical views of quality, there is, nowadays a general consensus on the importance of quality programmes. However, the implementation of these programmes faces a number of challenges starting from the lack of an explicit definition of quality, clearly defined methods of quality evaluation, and identification of who should determine evaluation criteria.[160]

Defining the meaning of "quality" is the first step towards understanding these challenges, and this will be discussed in the following section.

3.3. QUALITY AND ITS DEFINITION

In plain English, quality means "degree or grade of excellence". According to the Oxford Wordpower Dictionary,[161] quality can mean: how good or bad something is; or a high standard or level. In Arabic, the word which usually translates the English word "quality" means something very good or something which has been done in a perfect way. However, quality is an abstract concept and hence perceptions of its meaning are thought to be influenced by many factors, including religion and culture.

Pattison, exploring the hidden links and shared influence between what we now know as quality and religion, states, "one of the ways in which much

contemporary management theory and practice strongly resembles fundamentalist sectarianism is in its idealism and perfectionism. Perfectionism and idealism have been part of Christianity since its earliest beginnings in the ministry of Jesus" (Pattison, p.74[162]). Similarly in Islam, in the Quran[a] and Hadith[b], the Prophet Mohammed (PBUH) said, "*God likes that when one of you does a job, he does it perfectly*" (citied in Al-Assaf, p.11[163]).

In terms of health care, Donabedian claimed that the simplest way to define quality is by looking at the complete model of management of care that is provided by a doctor to a patient.[131] He divided this into three aspects: technical care (science of medicine), interpersonal care (art of medicine), and amenities of care.[130,131,164-166] Technical care is seen as the application of the science and technology of medicine and its implementation in the management of health problems. Good quality technical care would be, in this sense, to achieve the most favourable balance of risks and benefits. Interpersonal care is seen as the management of social and psychological interaction between the doctor and his patient. Although Donabedian pointed out that this aspect of care is more difficult to assess, he suggested that good quality interpersonal care can be measured by "the extent of conformity to the values, norms, expectations, and aspirations [of the patient]" (Donabedian, p.5[131]).

Donabedian also indicated that the interpersonal process is not isolated from the technical process and can contribute to the success or failure of technical care, by contributing to the balance of risks and benefits. Further, Donabedian viewed amenity of care as a component of the quality definition, while stressing that it should not be seen as an exclusive component in its own right, but linked with the management of interpersonal care. This is because amenities of care include

---

[a] The sacred text of Islam

[b] Defined in the English dictionary[161] as the report of the sayings or actions of Muhammad or his companions, together with the tradition of its chain of transmission.

the comfort, privacy, courtesy, acceptability of care (e.g. pleasant and restful waiting room, clean sheets, a telephone by the bedside, etc.).

In an attempt to simplify its definition, Ovretveit defines quality as: "meeting the health needs of those most in need at the lowest cost, and within regulations" (Ovretveit, p.231[31]). This definition is recognised in this thesis and elsewhere. Interestingly, although the literature is replete with attempts to define health care quality, such attempts appear to have failed to come to a unified definition.[150,160,163,167,168]

This appears to be due to two reasons: first, quality is a an abstract concept that can mean different things to different people and thus one definition is not likely to embrace the many different perspectives of the concept. For instance, Al-Assaf and Sheikh indicate that providers' perspective on quality might mean providing the best possible care to patients, whereas administrators' perspectives might focus on providing effective care in a cost-conscious environment, which might also include rationing of health care, particularly if resources are limited. On the other hand, a patient's perspective on quality might mean reviewing care when needed to cure conditions as quickly as possible and, most importantly, by the provider that the patient chooses.[163]

Consequently, the diversity of perspectives of what quality means for different interest groups makes it difficult to achieve a unified definition of it. Hence, many existing quality definitions are seen as 'objective definitions' and primarily used by different professionals to advance their interests.[31]

While some commentators agree that a simple definition of quality would be appropriate in some cases, such as organisational quality programmes to communicate the concept to the health care team, others, for example, Ovretveit, argue that a simple definition would be inappropriate in other contexts, such as for the purpose of quality evaluation.[31] Ovretveit contends that a simple definition of quality, such as "the ability of services to satisfy consumers", may be appropriate in the commercial sector, but will give rise to problems when applied to public services. He also argues that such a definition is of little use for

quality evaluation, because patients lack the technical ability to judge professional quality, and such a definition also fails to recognise different interest groups' requirements of quality.[31] Thus, for the purpose of quality evaluation in public health care services, a specific definition or criterion is needed to enable the evaluator to address the evaluation objectives.

Dimensional definitions

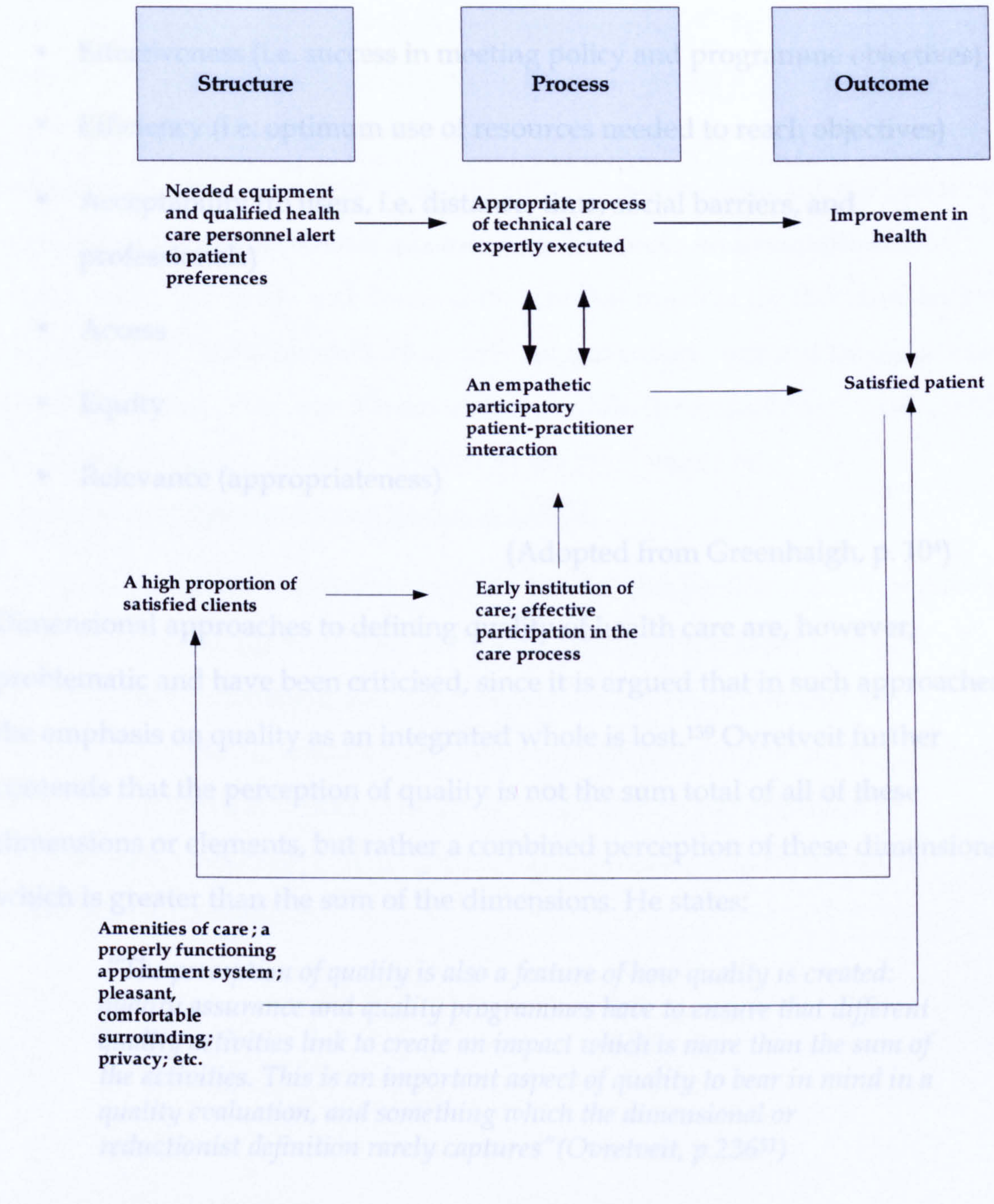
Given the difficulties of agreeing on a consistent definition of quality, many commentators began to develop an alternative approach to define quality, particularly for evaluation purposes, that is, the "dimensional" definition of quality.[31] This definition suggests selected criteria should be used to assess the quality of health care, which infers an implicit definition of quality.[31] Donabedian's conceptualisation of quality (structure, process, and outcome) is perhaps the most famous dimensional definition and has long been used as a framework for assessing quality in health care.[7,139,169-171]

Al-Assaf and Sheikh argue that Donabedian's model of measuring quality is based on the 'simple system theory', which describes any health care system as a fully developed system with a set of objects and components.[163] Donabedian's triad (listed below) has come to predominate in health service research.[172] (see figure 3.1).

- *Structure*: the physical and organisational framework within which care is given. This includes the staff, facilities and equipment available, the environment within which the care is delivered, and the documentation of procedures and policies.
- *Process*: the actual procedures and practices implemented by staff in their prescription, delivery and evaluation of care.
- *Outcome*: the effect of care on the client, plus the cost of providing that care

(Source: Moullin, p.71[2]).

Figure 3.1: Hypothetical relationship between characteristics of structure, process and outcome



Adopted from: (Donabedian, p.50[130])

Maxwell developed a six dimensional framework for defining quality in health care, seen as "helpful for deriving criteria for a quality evaluation" (Ovretveit, p.235[31]):

- Effectiveness (i.e. success in meeting policy and programme objectives)
- Efficiency (i.e. optimum use of resources needed to reach objectives)
- Acceptability (to users, i.e. distance, time, social barriers, and professionals)
- Access
- Equity
- Relevance (appropriateness)

(Adopted from Greenhalgh, p. 10[4])

Dimensional approaches to defining quality of health care are, however, problematic and have been criticised, since it is argued that in such approaches, the emphasis on quality as an integrated whole is lost.[139] Ovretveit further contends that the perception of quality is not the sum total of all of these dimensions or elements, but rather a combined perception of these dimensions, which is greater than the sum of the dimensions. He states:

> *"The perception of quality is also a feature of how quality is created: quality assurance and quality programmes have to ensure that different quality activities link to create an impact which is more than the sum of the activities. This is an important aspect of quality to bear in mind in a quality evaluation, and something which the dimensional or reductionist definition rarely captures" (Ovretveit, p.236[31])*

3.4. EVALUATING AND MEASURING QUALITY

There is acknowledgment that lack of an explicit and operational definition of quality weakens quality evaluation and measurement.[36] The literature suggests that the absence of a definition of quality has contributed to the shortage of specific criteria with which quality can be measured.[160] Moreover, because the definition of quality is problematic and still very much contested, the literature seems to drift away from attempts to define it to focus on its technicalities [a]. Accordingly, Sarvimaki and Benko comment that much of the literature seems to be preoccupied with "models for quality improvement, formulation of standards and criteria, and problems of measurement, while the definition of quality and good care is missing. Existing definitions are often vague or contradictory"(Sarvimaki and Benko, p.130[174]).

The lack of a unified definition of quality has led to a proliferation of evaluation types, derived mainly from four evaluation perspectives: experimental, economic, developmental, and managerial.[31] Ovretveit argues that the perspective of the evaluator will be influenced by these important issues: the goal of the evaluation (i.e. what to evaluate), methodology and approach to knowledge (i.e. training and disciplinary background), and for whom the evaluation is carried out.

---

[a] Toon shares this view: "What is striking is the lack of open discussion of the fundamental principles on which the various political decisions and standards are based, and of explicit theories of what is good and why. There is much discussion of particularities. Debates about personal lists and the use of deputising service are interminable, but very little discussion takes place on what holds our views on these things together to give general practice a coherence and unity....If we take the concepts of good practice and quality of care seriously, we need to consider what the assumptions we make about it are, and whether they are in fact true. Surprisingly, these issues have not been comprehensively addressed" (Toon, p.4[173]).

Traditionally, quality of care used to be evaluated and measured[a] by health care professionals.[175,176] This was usually done through setting standards (e.g. mortality and morbidity rates) and evaluating quality against these standards.[139] However, a number of changes contributed to a dramatic change in this situation. Brook et al. (p.966[176]) suggest that two main factors driving this change were:

- "The considerable advances in practice patterns and the quality of medical care, and clinicians becoming increasingly interested in having objective information about their practice; "and
- "Patients and purchasers demanding to know more about the quality of care available to them".

Shelton also contends that assessment measures used by health care professionals to evaluate and ensure quality, such as clinical and cost-effectiveness, were insufficient to ensure quality care because such measures did not give rise to patient satisfaction and loyalty.[175]

Problems seem not only to concern who should evaluate quality, but also what is to be evaluated, and which aspect of quality is the most appropriate to evaluate. Ovretveit identifies three common approaches to evaluating quality of care: outcome, process, and experimental evaluation.[31] In outcome measures of quality, the focus tends to be placed on outcome only, regardless of the service process and its internal activities. An example of this approach is the evaluation of the patient's satisfaction and functioning after receiving care.[31] Process

---

[a] It is worth noting that quality evaluation differs from quality measurement. This is because measurement is a concept which tends to mean the process of quantifying the amount of an item and does not involve judging its value.[31] Ovretveit asserts that this does not mean measurement is not without value judgements, since "what is selected for measurement involves a judgement of value in that the selected phenomenon is important in some way". On the other hand, Ovretveit explains that evaluation, although it involves measuring quality, differs from measurement because "the evaluation framework shapes which particular quality measures are to be used, and it is within this context that measures allow the users of the evaluation to judge value". Thus, quality measurement is a quantity-driven concept and quality evaluation is a value-driven concept.

evaluation tends to be more helpful for service providers, as more insight is given into internal activities that contribute eventually to outcome care. The last approach is experimental evaluation, which is intended to introduce continuous improvement in methods.[31] In this approach, certain attributes of the service are examined for their potential links to the production of high or low quality care.

Brook et al. identify five methods that can be used to measure quality on the basis of process or outcome data. The first three methods are implicit and the last two are explicit:

- Implicit methods: no prior standards or agreement about what reflects good or bad quality, for instance, a review of data sources after care has been delivered (e.g. medical records) and answering these questions: *method 1:* was the process of care adequate? *method 2:* could better care have improved the outcome of care? *method 3:* was the overall quality of care acceptable?
- Explicit methods: *method 4*: explicit process criteria. *method 5*: the use of prior-to-care explicit criteria to determine whether the observed results are consistent with the outcome predicted by a model that has been validated on the basis of scientific evidence and clinical judgement (Source: Brook et al., p.967[176]).

Brook et al.[176] point out that results of quality measurement will vary according to the method used. Moreover, explicit process-based methods are stricter than implicit outcome methods. Brook et al. provide an example of the extent to which using different measurement methods can lead to different results. Brook and Appel (cited in Brook et al., p.969[176]), report that explicit process methods' results suggested that 2% of patients received adequate care, whereas implicit outcome measurement methods in the same setting inferred that 63% received adequate care. Such wide variation in findings raises questions about the validity of some methods used to measure health care quality, but it is important to note that the selection of sources of data can also be very diverse.

Variation in findings derived from outcome and process research methods can be due to methodological limitations, both at the empirical and theoretical level. Attree reviewed the literature in this area and concluded:

> *"in order for abstract and multidimensional concepts, such as 'quality care', to be reliably and validly measured, the fundamental concept needs to be operationally defined, and the underlying theory made explicit...for the results of a quality assessment to be credible the measurement techniques need to be* ***reliable, valid and sensitive, and sufficiently sophisticated to be able to reflect the complex and multiple dimensions and perspectives of the concept 'quality care "*** *(Attree, pp.13-14[160]).*

3.5. DIFFERENT PERSPECTIVES OF QUALITY IN HEALTH CARE: A PLURALISTIC EVALUATION

Concerns about the limitations of traditional approaches to the evaluation of quality of care have given rise to the pluralistic evaluation approach, which Hall defines as "an evaluation which is meaningful to the diverse stakeholders involved" (Hall, p.23[36]). Pluralistic evaluation is founded on at least three assumptions:

Firstly, traditional approaches to quality evaluation are dependent on a "presumption rationality", which assumes that the development of a service follows a "systematic process", and that specific interventions will achieve predetermined targets and hence variables (i.e. patients) can be excluded from service development.[36] Hall points out that these assumptions have been contested by many scholars, particularly Smith and Cantley who "dispute these rationalistic assumptions and the effectiveness of traditional approaches to evaluation" (Hall, p.23[36]). Ovretveit agrees with Smith and Cantley that success is a pluralistic notion, which should not be measured by one perspective only, since other perspectives such as those of patients will be neglected.

Second, the pluralistic approach to evaluation makes possible the involvement of patients. Hall cites the growing acknowledgement in many countries of the

importance of social accessibility to services, as well as the outcome of services, to the satisfactory experience of the services delivered.[36]

Third, pluralistic evaluation is potentially independent of hierarchy, and hence offers a sensitive methodological framework, capable of eliciting diverse viewpoints.[36]

Accordingly, commentators such as Attree argue that perspectives on quality are not only important for evaluation purposes, but are an important element of any quality model. Attree lists three principal attributes of quality care: (i) Structure, process, and outcome criteria, (ii) context/ environment, and (iii) perspectives.[160]

Health care systems around the world are faced by escalating challenges, necessitating radical reforms. As Birch et al. put it, "both the medical profession and the professions allied to medicine are having to review their current arrangements for ensuring quality of professional practice and develop and implement new forms of performance management to meet the demands of the new quality agenda" (Birch et al., p. 20[35]). They argue that:

> *"One of the problems in developing any review of professional performance is deciding which aspects of performance are subject to review and who decides what are the appropriate standards or definitions of quality of care. Traditionally, 'good' professional performance has been determined from within the profession, since it has previously been argued that only those with specialists training and knowledge are in a position to assess medical performance. More recently, as illustrated by central policy, there has been a call to incorporate other views on quality into the equation, most notably those of the patient" (Birch et al., p. 23[35])*

Ovretveit lists the following steps as necessary for a pluralistic evaluation:

- Identifying the main stakeholders;
- Understanding and describing the interpretations which different parties make of events and the agencies with which they are involved, especially their interpretation of what constitutes 'success';
- Documenting the strategies which each party uses to advance its interests;

- The use of a variety of data sources and methodological triangulation.

(Source: Ovretveit, p. 130[31])

Main perspectives on quality

Recognition that different interest groups have different perspectives on what constitutes good quality, and therefore on how it can be evaluated, is crucial.[177] Generally, there are four broad perspectives on quality[35]: 1-professional/medical; 2-lay; 3- managerial; 4- political. Birch et al.[35] outline how three of these perspectives view quality from the professional/medical, lay and managerial perspectives:

- "Quality from a *professional* point of view includes ensuring the technical competence of staff, reviewing medical practice (through, for example, training, continuing professional development and medical audit), autonomous practice, achieving desired outcomes, and continually seeking to expand the limits of medical knowledge through the appropriate means".

- "Quality from a *patient* perspective typically relates to access, responsiveness, good inter-personal communication, information provision, appropriate treatment, relief of symptoms and improvement in health status".

- "Quality from a *management/commissioning* perspective incorporates factors, such as the most appropriate use of resources, ensuring that the care provided is of high quality, risk management, and developing services to take into account changes in both the 'external' and 'internal' environment".

(Cited from Birch et al., pp. 27-28[35]).

Managerial perspectives

In his analysis of managerial perspectives, Ovretveit argues that the management perspective is concerned with two issues: ensuring that things are done correctly, and that available resources are used to best effect.[31] In the past, managers evaluated health care organisations by collecting facts through simple and uncontested objectives, because at that time they tended to view the health system as 'a rational mechanism for implementing policy'. However, managerial perspectives have changed due to recognition of other competing interest groups who view facts and policy values differently.[31] In this regard, Hull commented, "it is acknowledged that the views of professionals alone rarely reveal the limitations of services with the clarity and recognition offered by those who use services. Gathering a range of views illustrates the existence of a problem. Then, as the findings are so rich, this illuminates the process of care to show how and why limitations arise"(Hull, p.25[36]).

The following section will examine changes in quality of care in relation to the Saudi Arabian health care system.

3.6. QUALITY OF HEALTH CARE IN SAUDI ARABIA

Developments made to quality programmes vary from one country to another. The literature on service quality is very much derived from developed countries. There are very few studies referring to developing countries,[168,178] and even fewer referring to the Saudi context.

De Geyndt counted 22 studies on quality in the field of health care in developing countries published between 1981 and 1993.[168] In all, outcome as a measure of quality was almost absent; seven studies had used structural indicators to measure quality, twelve had used process indicators, and three had used both. [168] De Geyndt attributed this emphasis on quantifiable and measurable inputs to the fact that most studies had been carried out by researchers with a background in economics. He also attributed the absence of outcome measures in developing

countries to the fact that "improving outcome is a presumptive result of improving the process and is not documented, mainly for lack of valid and reliable measuring tools and indicators, the expense involved, and the tenuous cause-effect relationship between process and outcome"(De Geyndt, p.30[168]).

Haddad et al. maintain that lack of research in the area of service quality, and particularly in PHC, in developing countries, is due to lack of interest in the idea itself.[22] They ascribe this to two reasons: first, priority has long been given to improving availability of services in contexts where there have been enormous needs that have rarely been met.

Second, the attitude of authorities in charge of health care, who have felt that evaluation and ensuring quality are luxuries reserved for developed countries. According to Haddad et al., confusion about the meaning of quality has slowed progress, and the general assumption that primary care is simply services which do not require or possess complicated technologies, has led to less urgency in setting quality standards

Haddad et al. noted the recent rise in interest in the quality of care in developing countries, and the practical steps, actions and studies being taken to ensure acceptable standards of quality. According to Haddad et al., such a trend "undoubtedly translates the concerns raised by the implementation of strategies to improve the continuity and effectiveness of PHC services... it is also the consequence of the repeated observation of strong links between the quality of services and use of these services"(Haddad et al., p.381[22]).

Saudi Arabia adopted quality assurance programmes in 1991.[179] The decision was made after delegates from the MoH attended the Inter-regional Meeting on Assurance of Quality in PHC in Shanghai, China, in October 1990, which was organised by the WHO. The Saudi manual for Quality assurance in PHC states that the objectives for quality assurance programmes are:

- "To set standards for the different activities and services provided by health centres that are responsible for implementation of the primary

health programme, which in addition to other supportive activities, includes the eight elements of the PHC programme (health education, immunisation, community participation, supply of safe water, etc. The standards will cover the resources, procedures and outcome of the above-mentioned activities. **These correspond to Donabedian's framework of structure, process, and outcome."**

- "To define sensitive and objective indicators for the assessment and continuous monitoring of: a) compliance with present standards; and b) outcome measures of health service activities and their impact on the community."
- "To refine the processes of planning, monitoring and evaluating PHC services"

(Source: Al-Mazrou et al., pp.18-19[122]).

The next section will discuss studies of existing methods of quality evaluation in developing countries.

3.6.1. Criticism of existing methods of quality evaluation in developing countries

Quality evaluation in developing countries appears to be influenced by either technocrats (health care professionals or managers), and less frequently, the local community.[22] According to Haddad et al., studies based on technocratic perspectives are becoming more frequent and put forward the viewpoints of other health care professionals, and possibly the government which employs them. They, however, criticise this type of evaluation for relying on a normative definition of quality, in which the quality of services is judged to be good or bad in so far as it does or does not reach certain predefined standards.[22]

In contrast to technocratic evaluation, Haddad et al. assert that evaluation based on communities' perspectives is more appropriate, because recipients of PHC services play a central role in defining and assessing quality of care. Moreover,

they argue that quality programmes are meaningless if the intention is not to provide customer-oriented care and to specify customer satisfaction as the goal for quality programmes. They also give other important reasons for quality evaluation based on communities' perspectives:

> *"The evaluation of the quality perceived by the public is justified by the desire to meet users' expectations, thereby contributing to "the process of democratisation of health care services "(Calnan, 1988). It also legitimates practical considerations since the viability of the health resources appears to be closely linked to the perceptions that communities have of the quality of the services they offer"(Haddad et al., p.382[22]).*

The gap between Saudi Arabia and developments in the West appears to be related to two important areas: first, as will be discussed in detail in the following chapter, power conflicts appear to be an influential factor in shaping new reform strategies, including the shift from traditional evaluation to a more pluralistic approach. Those who run the service may feel their position and social status threatened.

Second, the literature, at least from developing countries, seems to ignore different perspectives on quality of care, because much attention has been given to the conceptualisation of quality itself (i.e. structure, process, and outcome). For instance, in what is regarded as a working manual for quality assurance in PHC for developing countries, Roemer and Montoya-Aguilar present a detailed account of Donabedian's triad and its assessment, with virtually no reference to the patient's perspective.[180]A recent WHO document on strategies for sponsored quality in health care improvements in middle and low-income countries,[181] lacks any reference to patients' views on quality while much emphasis is given to the technicality (monitoring, accreditation, etc.) and methodologies of quality.

Although Donabedian's triad of structure, process, and outcome remains predominant in health service research,[31,147,150,172] his conceptualisation is almost thirty years old, and there have been major advances in the literature since then. His triad is frequently criticised for its linear relation between structure, process and outcome, and its failure to capture the dynamics of the relationship between

major interest groups, systems, interventions, and outcome.[169] Focusing on Donabedian's model in this manner reveals the predominance of the 'absolutist'[a] definition of health care quality.[21,22]

The UK and many other developed countries introduced quality assurance programmes during the 1980s for various reasons, but drive for change was mainly influenced by British health service researchers and policy analysts.[135] These groups have continued to produce suggestions inspired by Donabedian's original model in order to accommodate the dynamics of health care delivery. Patients' views on quality are high on the health care agenda and the important issue now is not whether a patient is happy about quality, but what quality means to the patient.[136]

Huycke and Anita indicate that models based on Donabedian's work, such as the *Quality Health Care Outcome Model* developed by the American Academy of Nursing Experts' Panel on Quality Health Care, place more focus on the pluralistic approach towards evaluating quality.[169]

It thus appears there is a general trend in quality research in developing countries to place more emphasis on patients' views and satisfaction research. As discussed above, the changing culture of health care delivery around the world makes such a shift inevitable. In this regard, Atkinson and Haran comment "in order to improve health care provision, managers need to be able to differentiate between factors they have control over, and those that are part of a wider social and political context"(Atkinson and Haran, p. 502[178]).

However, as Haddad et al., (p.382[22]) acknowledge, there is a gap in the literature in this area of quality research and, more specifically, studies with the specific

---

[a] Donabedian suggested three different definitions of quality in health care: individualised, absolutist, and social. In the absolutist definition, health care professionals, as experts in the field, have the prerogative to contribute to the definition of health and its quality: "management is expected to achieve the best balance of health benefits and risks". Therefore, the professionals' task is to recommend and set out standards for quality.[131]

objective of identifying the criteria that patients apply to judge PHC services are lacking in developing countries.

The next two sections will discuss different models of quality of care in PHC.

3.7. QUALITY IN PHC

Although the vast bulk of published studies in the field of service quality is derived from hospital-based services, interest in promoting service quality in primary care is growing from one country to another. Much of the available literature is derived from developed countries like the US and the UK. This section aims to provide an overall picture of quality development in PHC and how this benefits PHC services.

Peter Toon,[173] a prominent author in general practice research, reviewed the historical developments of NHS reform and their impact on general practice services, and concluded that in the last thirty years, general practice services in the UK have gone through a period of evolution and internally motivated development regarded as a positive trend by most practitioners. These developments have, however, been accompanied by external pressures not entirely welcomed, and even seen as a threat to the future direction of general practice services; for example, the new GP contract of 1990, the NHS' reform of its hospital services, and the consequent advent of GP fundholding. According to Toon, heated debate has been generated in both public and academic domains as to how general practice services should develop and how quality of care may be improved without adversely affecting the values and long tradition of general practice services. Toon comments, "in such a period of rapid changes, every structure and institution becomes open to question and the debate quickens"(Toon, p.vi[173]).

Development of general practice services, and particularly improvement of their quality, depends on the concept of what good practice is, because general practice is an open-ended field of clinical medicine without clear boundaries, in

which there are many judgements to be made. There are many interest groups with varied perceptions of good general practice who also make decisions, either at consultation or policy levels, such as doctors in their private consultations and individual family health services' authorities which make policies which affect health care. External bodies are also involved in judging health care, such as the RCGP, government, and patient organisations. Toon asserts that this is only half the story, because the structure of general practice services is high on the political agenda and further changes are predicted. Toon has proposed four models for quality in general practice services: biomedical, teleological, "the new kind of doctor" (this term comes from the work of Tudor Hart[182]), and general practice as a business and patients as consumers. McSweeney (1997, cited in Moullin[2]) developed Toon's models and provides four other models of quality in PHC, albeit similar to Toon's:

- Biomedical: correction of biological dysfunction through accurate clinical diagnosis. Appropriate relief of symptoms and cure from disease.
- Teleological: viewing patients from a more holistic perspective, helping them understand their illness. Being empathetic and compassionate. Offering privacy, dignity and confidentiality.
- Preventive: offering services which prevent disease or lower risk (e.g. immunisation and screening). Promoting a healthier lifestyle.
- Business: offering an expanded menu of services (e.g. counselling, physiotherapy, blood tests) on the premises. Convenient appointments and acceptable waiting times. Attractive décor. Well-designed layout (Source: Moullin, p.15[2]).

Moullin, nevertheless, argues that no single model of the above is capable of meeting all the needs and expectations of service users and other stakeholders. For instance, no surgery (PHC centre) can function without applying the biomedical model but other models are also important and, in fact, each model complements the others. In a sense, patients want symptoms relieved

(biomedical model) but also want to be treated with empathy and compassion (teleological model), and to be offered immunisation and preventive services (preventive model), and last, but not least, to be in a comfortable, pleasant environment (business model). Moullin thus concludes that "all four models are relevant and this is the extent of the challenge of managing quality in health and public services" (Moullin, p.15[2]). In terms of PHC evaluation, Starfield (p.250[71]) suggests four aspects need to be considered when evaluating quality in PHC: resource capacity, service delivery, clinical performance, and health status assessment.

3.8. SUMMARY

This chapter has reviewed the literature on quality of health care. It has provided a background and history of the quality movement and described the emergence of the quality concept in the public sectors particularly in health care. Many attempts have been made to define quality, and existing definitions are often vague or contradictory. The chapter has examined useful approaches to define quality, focusing particularly on the work of Donabedian whose contribution to the conceptualisation of health care remains predominant in health care service research. Methods to evaluate and measure quality have also been discussed.

The literature has identified three common approaches to evaluate quality in health care: outcome, process, and experimental evaluation.[31] An overall picture of quality development in PHC and how it benefits PHC services has been presented. Four models have been described (biomedical, teleological, preventive, business).

The foregoing discussion has clearly indicated that patients' perspectives on quality of care should be incorporated with other main perspectives to evaluate and to set its standards. A pluralistic approach has been advanced in the literature as an alternative to the traditional approach to evaluation. However,

this is seems to be a neglected area of research, in developing countries, and in particular in Saudi Arabia, hence, the need for this study.

Patients' views as stakeholders in the health care process will be the main focus of the next chapter.

CHAPTER 4. IMPORTANCE OF PATIENTS' VIEWS ON QUALITY

4.1. INTRODUCTION

The previous chapter highlighted a number of themes that are particularly important when considering quality and its evaluation. A salient theme is that service quality differs from manufacturing quality, and thus different considerations have to be taken into account when evaluating it. Service quality is a value-laden concept and, more importantly, multidimensional and, therefore, different people will have different views and opinions regarding its value and assessment.[31]

In Western health care systems, patients' views are increasingly seen as a key element in health care evaluation.[183] Although the Saudi Arabian health care system closely resembles the Western model, and is a collectivist system like the NHS, the idea of eliciting patients' views is not yet fully established. Despite a growing number of patient satisfaction surveys in Saudi Arabia, patients' views remain a neglected area of research. Moreover, most studies have been based upon other studies, particularly those derived from Western literature, and their findings can be criticised on two fronts: first, most depict a high level of satisfaction, which, as will be explained later, may be superficial and illusory, and, second, they fail to capture aspects of care that are really important to patients, because most satisfaction surveys are pre-designed by researchers who neglect issues which patients might wish to include in the survey design.

Although managerial and other health care personnel perspectives on health service quality are important for this study, patients' views are the main focus. The aim of this chapter is therefore to explore the literature relating to patients' views of quality in health care, and identify how developments in other countries, particularly the UK, can inform future development in Saudi Arabia.

This chapter starts by identifying the different contexts in which obtaining patients' views is important and also considers the difference between patient and public collectivist involvement in health care services. It then presents a brief account of the literature of the concept and implementation of community participation. The debate on different methodological approaches used to obtain patients' views on quality is presented. The concluding section presents a brief analysis of the current position and general attitude to patients' views in Saudi Arabia.

4.2. WHY ELICIT PATIENTS' VIEWS?

A wide range of contexts can be identified to explain the growing importance of eliciting patients' views in general. For instance, there is a quality agenda where patients' views are increasingly seen as an essential part of service evaluation.[31,36] Another context is the tendency, at least in Western societies, to emphasise a political perspective and the need to democratise or counteract the democratic deficit in health care through public participation and a market economy approach to health care.[125,184]

As Carr-Hill points out, in this mode, patients' views can be seen not only as a counterpoise to the hegemony of medical professionals, but also as a component in a wider "consumer sovereignty" where health services should be shaped and tailored according to patients' 'demands and preferences'.[64]

There is also an ethical dimension, particularly for certain groups of patients, such as those who need to be fully informed about the benefits and risks of their treatments, such as chronically ill patients.[185]

Two of the above contexts have particular relevance to health care service quality. First, patients' views and experience of care received are an important aspect of general evaluation and can contribute, if used, towards improvement and development of health care services.[185] In an evaluation of quality of care, it is important to take into account not only clinical effectiveness, economic

efficacy, and equity, but also patients' views on quality, and whether or not the care provided is acceptable to them. Hence, different stakeholders' perspectives (managers, professionals, and patients) need to be given equal weight, or at least taken into account. In the UK, Tritter and Calnan note that the importance of patients' role as evaluators of the care they receive is increasingly stressed.[185] The legislation of successive governments has emphasised the importance of eliciting patients' views, and it has become a statutory duty for the NHS to respond to these views by putting the required changes into practice.[185]

Second, patients' views can also be considered as part of a wider initiative of involving patients in democratic participation and the decision-making process.[125] In this sense, patients' views can be employed at several stages and thus there are a number of degrees to which patients can be involved in health care. At one end of the spectrum there is passive involvement, where providers take account of patients' complaints, or elicit patients' views by carrying out surveys about particular aspects of care they receive. This passive involvement can be regarded as minimal level (or tokenist) involvement in health care.

A further level is active involvement, which includes getting patients involved in democratic decision-making, by electing lay members of the public to health care policymaking bodies, so they have the opportunity to exert influence on the decision-making process. Hence, there is a range of level of involvement, starting with passive involvement (eliciting their views) to active involvement by participating in the decision-making process. Whether or not a higher level of involvement automatically leads to better quality has yet to be empirically tested.

Regarding the quality agenda, considering patients' views on quality is vitally important for the general evaluation of service quality, because if patients' views are not taken into account, their negative attitude may affect the impact of quality programmes (they might not comply with treatment, miss appointments, be unhappy, not get better, etc.) and adversely influence the outcome of the service. Moreover, managerial (economic efficiency) and professional (clinical effectiveness) agendas of quality programmes may be unachievable if patients'

views and perspectives on quality are not synthesised and amalgamated in a quality evaluation initiative.

4.2.1. What is the difference between patient and public collectivist involvement in health care services?

Realisation of the importance of patients' views has not arisen out of a vacuum. Throughout history there have been a number of developments led by different scientific disciplines. However, before these developments can be briefly outlined, it is important to define patients' views, and the difference between patient and public collectivist involvement in health care services.

4.2.2. Definition of patients' views

Difficulty arises when trying to define patients' views because the terms 'views' and 'patient' are perceived differently by different people. For instance, the word *view* in the English dictionary means: a): an opinion or belief or idea, or a way of thinking about something, and b): a way of considering or understanding something.[161] Within the context of health care, a patient's view becomes even more complicated since his/her opinion, ideas, beliefs or thoughts are likely to embrace a complex set of preferences, expectations, culture, experiences, and possibly ignorance and prejudice.[159] The apparent complexity of a patient's view gives an indication of its significance, as any attempts, mainly by professionals, to act, predict or judge on behalf of patients will not be successful,[186] since only patients really know what they think of, and want from, care services.[126]

The definition of the term patients is also not clear since there are various titles given to patients- 'user', 'client', 'consumer', 'customer'. Different titles may indicate either entitlement (i.e. the term user may imply active role) or provider duty to the patient (i.e. a client or purchaser of care). A patient may want to be called simply a 'patient' and different terms may be more meaningful or important to providers than patients.[136] As Coulter points out, a recent survey

showed that 77% (n=147) of patients preferred to be called 'patient' rather than 'client' (Coulter, pp.7-8[136]).

Given the difficulties pertaining to defining a patient's view, the literature appears to give little attention to doing so and places more emphasis on the terminology of involvement.[126] Florin and Dixon note that despite attempts to define patients' views and patients' involvement,[126] these concepts remain inadequately defined, possibly because patients' views and patients' involvement are two overlapping concepts.[126,187] Pragmatically, patients have views and perspectives about the care they receive, irrespective of whether they have been asked or consulted. For instance, a patient expresses a view (through a complaints system, media, survey, citizens' juries[188]) and the health care provider's role is to give attention to this view and address it. Hence, the patient is given a role, albeit minimal, of involvement in health care by expressing his/her views and preferences. Patients' views in this sense could contribute to a policy shift, such as where patient advocacy groups, for example, self-help groups may impose patients' views on policy agenda, a 'bottom-up' approach as opposed to a 'top-down' one. Although caution is needed when using the terms 'patients' views' and patients' involvement', patients' views on quality will be taken in this thesis to mean the involvement of patients in the evaluation of quality.

Public involvement

Harrison et al. argue that if patient (individual) involvement is taken in the literature to mean "specific debates about appropriate governance for specific services"(Harrison et al, p.1[125]), public collectivist involvement, in contrast, means the engagement of a large number of the public in strategic decisions and policy planning about health care services at both local and national levels,[125,126] for example, through "a series of broader debates about democracy and citizenship" (Harrison et al., p. 1[125]). It is further argued that public involvement has the dual advantage of promoting education and, at the same time, is an intrinsic means of restoring shaken public confidence in the democratic process,

by supplementing inadequate democratic representation. Therefore, public involvement, as depicted in the literature, is a term that embraces a variety of activities or objectives.[126]

The following table (4.1) illustrates different activities of involvement in the health care system undertaken by both the individual and public groups. It also summarises the above discussion, and illustrates degrees of patients'/ public involvement in the NHS. The table moves from a minimal level (provision of information) to a more active level (shared-decision-making). Research on health quality, such as this study, may fit into the middle and final levels of this schematic framework.

Figure 4.1: A model for effective public and patient involvement

	Information	Feedback	Influence
Individual	Information to patients and carers about treatment and services	Patients can provide feedback on their own care and treatment, and raise issues of concern (e.g. PALS* complaints)	Shared decision making between patients, carers and professionals Expert patients
Collective	Information to the wider public about how well the organisation is doing	Trends in complaints, (PALS*) issues, etc. Feedback on patients experience	Involvement in policy and planning
Outcomes			

**PALS =Patient Advocacy and Liaison Services*

Source: Adopted from CHI report, p.9[189]

4.3. COMMUNITY PARTICIPATION: HOW IT CAN BE IMPLEMENTED?

As discussed in section 2.6.1 in chapter two, the concept of community participation was envisaged by the WHO not only as a mean of providing a sense of responsibility and rights to the local community, but also as a means of providing more efficient and equitable health care. Community participation

encourages the local community to become involved in matters concerning their own health, and also promotes social justice and equality.[190] The WHO vision and the anticipated benefits resulting from a community participation programme can be summarised as follow:

1. "coverage – involves more people than non-participatory projects;
2. efficiency – promotes better co-ordination of resources;
3. effectiveness – goals and strategies are more relevant as a result of participation;
4. equity – promotes the notion of providing for those in greatest need;
5. self reliance – increases people's control over their own lives".

(Cited from Bandesha and Litva, p. 241[190]).

However, although the concept of community participation occupies a central place in the WHO view of PHC, little is known about how the concept of participation is operationalised and implemented at local and national levels in many developing countries, including Saudi Arabia. Literature from Western countries, particularly the UK, not only provides examples of how the concept can be operationalised, but also examines more closely the theoretical foundations and the underpinning changes that have led to the emergence and shift towards greater public involvement in health care. Therefore, the purpose of this section is twofold: first, to provide a closer look at the theoretical basis and factors that have changed the views of health care providers on the role of the public and the increasing emphasis on participation and partnership. Second, to provide a few examples of the ways in which community participation initiatives have benefited communities and service providers.

Many commentators, such as Pickard and Smith, argue that the concept of lay participation derives from two different theoretical frameworks: the consumerist framework and the citizenship framework.[191] According to Rowe and Shepherd, the consumerist framework is conceived in "instrumental terms", as a way to elicit consumers views and preferences concerning the service they receive. In other words, the consumerist framework theoretically translates the concept of

participation into consumers' rights to information, access to services and redress.[192] In contrast, the citizenship framework seems to take a different approach ,placing greater emphasis on development through democratisation. This approach, which the WHO espouses,[193] is further explained by Rowe and Shepherd who assert that "In the democratic model, participation is seen as a means of legitimising decisions by enabling citizens and users to challenge and force those in power to consider and justify their practices. It is seen as a force for democratic renewal, bringing decision-making closer to the people and mobilizing them to take part in local affairs" (Rowe and Shepherd, p. 278[192]).

In the UK and many other countries, a number of dramatic changes have contributed to bring about a fundamental rethink of the patient's role and involvement in health care systems. It is beyond the scope of this thesis to elaborate on all the sociological, professional, and economical changes that contribute to such changes. However, as chapter three section 3.2.2 illustrates, the emergence of quality and changes in management thinking, as well as socioeconomic changes in the population, are among the main factors which have changed the patient's role in health care systems. In the UK, since 1972, there have been a number of initiatives aimed at translating policies of community participation into practice.[193] These initiatives can be related to both community participation and the theoretical framework discussed above. For instance, Pickard and Smith argue that initiatives such as the Patient's Charter, Complaints Procedures, Consumer Audit and Participation all derive from the principals of the consumerist framework. In contrast, initiatives such as Local Voices, Citizens' Juries, Health Panels, and Community Health Council are derived from the concept of the citizenship framework of participation. However, Rowe and Shepherd emphasise that, although these two theoretical foundations serve to explain the different mechanisms whereby participation may be operationalised, it is "overly simplistic to expect such normative models to be implemented in practice". They explain that there are occasions where the concept of participation was interpreted in relation to a combination of these

theoretical framework such as the New Public Management paradigm, which links these two in its emphasis on both economical and political elements.[192]

In reality, it was not until the late 1990s that community participation was finally translated from policy rhetoric into tangible projects. Many commentators regard the establishment of Primary Care Groups (PCGs) and Primary Care Trusts (PCTs) in the late 1990s as the first time since the inception of the NHS in 1948 that communities and primary health care services were "brought together".[194] However, this is a slanted picture of what success these new initiatives have achieved, particularly in increasing local community understanding and the acceptance of the concept of community participation and the associated health gains from such initiatives.[190] Those who hold optimistic views, such as Poulton;[195] Crawford et al;[196] Pritchard;[197] share similar views. Alborz et al. argue that there has been "a genuine desire to involve the public and willingness to try to do so in the face of so many competing priorities.... [community participation is high on the agenda] as evidenced by the appointment of lay board members, the establishment of public participation working groups, and the development of written strategies for involving the public" (Alborz et al, p.25[194]). In contrast, those who hold pessimistic views argue that there is an absence of clear evidence on the impact and influence of community policy making and decisions,[194] and the concept of patients' participation is not fully understood, either by health care professionals or by patients themselves.[194] Most commentators are also in agreement that medical professionals are still reluctant to engage fully with the community, as Poulton rightly indicated: "due to professional protectionism, which works against sharing power and demystifying knowledge" (Poulton, p.1289[195]). However, Crawford et al. take a more positive line, concluding that:

> *"This absence of evidence should not be mistaken for an absence of effect...The effects of involving patients are likely to be complex, affecting different aspects of services in different ways. The views of patients are among many factors that influence change in health services, and providers of health care remain the final arbiter of how much weight is attached to patients' views. Separating out change*

specifically attributable to the participation of patients is a difficult task. Despite these problems, possible effects, amenable to formal evaluation, of involving patients have been discussed, including extent of use of the service, satisfaction, and quality of life. Patients' involvement is not without its costs, and including outcome measures in future evaluations of involving patients could enable comparisons of different approaches and evaluation of the effects of suggestions made by patients." (Crawford et al, p. 1266[196])

4.4. WHY ARE PATIENTS' VIEWS IMPORTANT FOR QUALITY?

> *"What is important is to recognise that the manner in which we conceive of health and of our responsibility for it, makes a fundamental difference to the concept of quality and, as a result, to the methods that we use to assess and assure the quality of care" Donabedian (p. 4[165]).*

There is agreement among scholars that quality of care is considered to be a multidimensional concept and has been given different meanings in the literature. As Larsson and Larsson indicate, "patients' views on what is important in connection with the care they receive may be seen as one aspect of quality of care, and patient satisfaction has increasingly come to be used as an indicator of this quality" (Larsson and Larsson, p. 34[18]). Consequently, patients' views on what constitutes good quality of care are being increasingly recognised as an important source of quality indicators.

In short, realisation of the importance of patients' views on health care has been developed over a long period of time and has been strengthened by a number of academic disciplines. As Marshall and Campbell point out, "demands to improve the quality of health care are part of a bigger picture, reflecting the changing society in which we live"(Marshall and Campbell, p.3[198]). An account of the main forces contributing to change in current health care services would require a broad look at changes that have taken place within the health care system (i.e. economic constraints, increase of demand[151],etc.) within medical care (i.e. decline of power, orientation from treatment to prevention[199]), within the political system (i.e. interest to use health issues for election purposes) and, most

importantly, within society (i.e. demographic changes, narrowing knowledge gap, cyberchondriacs[200]) .

4.5. METHODS FOR ASSESSING PATIENTS' VIEWS ON QUALITY

> *"If services are to be shaped by patients' views, methodologically sound ways of obtaining their views and encouraging people to come forward and present them are needed" (Richards, p. 277[188]).*

The literature review of methods used to obtain patients' views on quality of health care indicate two main broad categories: (i) quantitative research derived from positivistic inquiry and (ii) qualitative research.[35,201-208] The following sections elaborate on these two approaches.

Satisfaction research

As indicated in chapter three (section 3.2.2), recent shifts in management thinking in the field of service quality in health care have stimulated interest in eliciting patients' views. Measurement of patient satisfaction was felt to be the most appropriate method for achieving this goal. Therefore, since the 1980s, the literature becomes replete with studies which seek to assess how satisfied patients are with the care (or components of care) received. Many commentators (such as Wensing et al.;[11] Wensing et al.;[209] Concato and Feinstein;[210] Lewis[19]) have attempted to empirically examine which components of care are important, and related to quality of care. In their study to identify patients' priorities in general practice, Grol et al. asked patients (n=3540) from different European countries to prioritise 38 items of care. They found that the top ten items identified by patients were related to access, the doctor-patient relationship, communication, competence, courtesy and respect for privacy.[13]

Similarly, Bower (p.1[26]) identified two "overarching" domains related to quality: access (are care facilities accessible when needed?) and effectiveness, which can be further divided into quality of technical care and quality of interpersonal care

(is care any good when accessed?). Moreover, Bower identified a list of eight further sub-domains relevant to patients' assessment of PHC:

- Access, such as waiting times for consultations, out-of-hours care, physical accessibility and financial barriers to access.
- Quality of technical care, such as medical knowledge, effectiveness and safety.
- Aspects of the doctor-patient relationship, such as patient-centredness, knowledge of the patient, communication skills, humaneness, involvement in decision-making, empathy, information provision and support, and trust.
- Continuity, both duration of the relation with primary care practitioners and proportion of consultations with a particular practitioner.
- Coordination of care by primary care practitioners.
- Organisation of care, such as the suitability of premises and the availability of particular services within practices.
- General satisfaction with care
- Outcome of care in terms of symptoms, function and quality of life.

(Cited from Bower, p.1[26]).

The quantitative approach to elicit patients' views, and in particular satisfaction research, has attracted wide debate and criticism. For instance, Birch et al.[35] stress that although satisfaction survey methods produce valuable results, it is important to identify those aspects of care which are important to patients since patients may be very satisfied with one aspect of care, which may not necessarily be that important in health care provision, such as catering or support services.[136] "The 'gap' between satisfaction and salience may have a profound effect on patients' evaluation of services' provision, especially if services are not providing what patients feel they need"(Birch et al., p.24[35]). Moreover, patients' views on

service quality may generate a clash with service providers, since what patients feel they want may be judged by providers as non-medical necessities.

Further, despite their enormous popularity since the 1970s[63] as an important means of eliciting patients' views on quality, patient satisfaction surveys have failed to produce the expected level of quality improvement and thus, many would argue, they have had little impact. Cleary suggests that there is general agreement that satisfaction surveys are flawed measures of health care quality,[211] a view echoed by Williams et al. who state, "Despite their widespread use, satisfaction surveys have been frequently criticised on both theoretical and methodological grounds; in addition their usefulness in generating change in health service provision has also been questioned"(Williams et al., p. 1351[212]).

Others have pointed to several pitfalls attached to satisfaction research particularly on two fronts: logical and empirical weakness.[211,213] On the logical front, patient satisfaction is frequently criticised for lacking a 'well-supported' definition as well as lacking a psychological model of satisfaction.[63] Pascoe suggests this is because research on patient satisfaction has been preoccupied with examining sociodemographic associations of satisfaction, rather than on efforts to develop a 'solid sociopsychological theory' of satisfaction.[63] Despite this, Pascoe identified three commonly used theories of satisfaction: attitude theory (value expectancy) models; discrepancy theories; and fulfilment theories. All these theories have been derived from job satisfaction research. According to Pascoe, each of these theories defines satisfaction differently. He also notes that most patient satisfaction research applies discrepancy theories because researchers seek to match expected care with patients' perception of the quality of care received. Pascoe claims that patient satisfaction research has not acquired the conceptual and empirical development of market-based research and therefore implicitly criticises it, calling it consumer-satisfaction research.

Sixma et al. concur with Pascoe regarding the lack of a theoretical framework in patients' satisfaction research, and comment "Theory and methodology in this field appear to have developed along separate lines of interest"(Sixma et al., p.

82[214]). However, Sixma et al. refute the idea of dissimilarity between market-based research and patients' satisfaction research. They claim that the business based SERVQUAL model of consumer satisfaction, developed by Parasuraman et al.,[215] can fit the gap between theory and practice in patients' satisfaction research.[214]

Empirical weakness attached to satisfaction research has been the focus of much attention. First, patients' satisfaction surveys have been criticised for lacking minimal standards of conceptual or methodological rigour, their weak design in not producing the expected quality improvement, and even misleading those working to improve quality processes.[211] Studies show that responses to such surveys are subjective and difficult to interpret because of the complex function of expectations and almost exclusive focus on "hotel" services of care, such as quality of food. Further, the validity of scales developed to measure patients' satisfaction has been continually criticised. In this regard, Larsson and Larsson assert, "While several of these scales may be creatively designed, a major criticism against most of them is their lack of theoretical foundation. The selection of indicators has generally not been related to empirically based models of patients' conceptions of the area... consequently, one cannot be sure that the attributes chosen in the scales are those most important to quality of care" (Larsson and Larsson, p.682[216]). Therefore, instruments used in assessing patient's views "should be studied in the context of their intended application. Quantitative as well as qualitative approaches can be used to measure patients' views. The effectiveness and efficiency of the methods should nevertheless be studied in terms of their consequences for the process and outcomes of health care" (Wensing and Elwyn, p.155[28]).

Second, patient satisfaction research usually produces high levels of satisfaction[20,217,218] (i.e. overall satisfaction rates of over 90%[20]). Many authors, for example, Fitzpatrick;[219,220] Williams;[23] Batchelor et al.;[66] Lewis,[19] and others, have attempted to identify the reasons why patient satisfaction surveys are rarely able to elicit negative views among the patients studied. In this regard, Fitzpatrick

comments, "One reason is the reluctance of many patients in the NHS to express critical comments about their health care"(Fitzpatrick, p.888[219]). Other authors appear to support this view, referring to some patients' concern about confidentiality or desire to appear grateful.[26] This problem not only exists in the UK but is seen at the global level.[20]

The most significant point is that patient satisfaction surveys are usually set according to professionals' agendas. Carr-Hill acknowledges the drawbacks of satisfaction surveys, particularly their meagre contribution to overall quality improvement and limited sensitivity in detecting variation of the service quality, but nevertheless points to the growing interest in their use. Carr-Hill argues that this may indicate that service managers are keen to know what is right, but not what is wrong.[64] Politicians are also able to make capital out of results which indicate high satisfaction, even if it is superficial.

The impact of satisfaction research and methodological/ theoretical flaws are two distinctly different things and are not necessarily directly related. A more sensitive method of eliciting patient views might have a more powerful impact, particularly one capable of capturing diverse opinions and responsive to local needs.

Qualitative research

There are a number of sources which can be used to identify key issues that are important for patients. Bruster notes these sources can include the media, previous research, complaints letters, speaking with staff.[203] However, he argues that

> *"There is no substitute for asking patients themselves to identify the key issues and what is most important to them. For all the surveys used as part of the National Survey Programme and all surveys designed by Picker Institute Europe, a significant amount of development has been undertaken with patients. It must be recognised that good quantitative work has to be based on a foundation of good qualitative work and so much of the development work has been based on qualitative work with patients in the form of focus groups or in-depth interviews". (Bruster, pp.61-62[203])*

In-depth studies (using both qualitative and quantitative methods) focus on areas such as the illness experience, perceived need and attitudes towards the service provided. In a sense, qualitative methods do not impose anything on the patient, because they have their ideas and conceptions about quality.[221] Hence, eliciting patients views in a qualitative manner will lead to discovery of other factors as important to patients.[202,207]

As well as advocating the use of qualitative methods as a precursor to quantitative research, new trends in the literature appear to give increasing importance to report-assessment based methods for eliciting patients' views.[28] In this approach patients are asked to report on specific aspects of care (such as access, waiting times, and availability of services or medication).

Bower asserts that "focussing on reports is based to a degree on evidence that patients can accurately measure objective aspects of care such as access and continuity" Bower (p.3[222]). In this regard, Cleary states:

> *"It is now widely recognised there is a need for rigorous methods, other than clinical conversations, to elicit patients' views on such matters as treatment decisions and the quality of care received. Much effort has therefore been devoted to developing and evaluating survey measures that elicit reports about specific care experiences that reflect quality of care, not amenities. Such questions are less subjective and less influenced by patient characteristics, are more interpretable, and thus may be acted on for quality improvement purposes"(Cleary, p.720[211]).*

Methodological perspectives on PHC

As discussed in chapter two, PHC is designed to provide essential and affordable care to a wide range of the community, using appropriate technology and skilled but not specialised health care professionals. Hence, PHC and health care professionals working at this level have unique characteristics (training and skills etc.) that distinguish them from those in other levels of care.[223] Likewise, PHC patients are different because their medical symptoms are usually varied and unspecific and often linked to social and psychological factors. Thus, research needs for PHC have to be different from those of health care in general. In this regard, Helman affirms that "research, as well as diagnosis and treatment, has to

move beyond the limited agenda set by other branches of medicine"(Helman, p. 105[224]).

One challenge facing research on PHC is that there is a great deal of uncertainty and confusion between PHC and other levels of care which has led some commentators, such as Starfield (p. 377[1]), to assert that research on PHC suffers from historical neglect and lacks scholarly interest. Many commentators have attempted to investigate the reasons for this lack of interest. Geest et al. claim that PHC research has been neglected due to the lack of a unified definition of PHC as well as different perceptions of its nature.[225] Kuzel and Like also suggest that research on PHC has mainly relied on qualitative research which, for some, makes PHC research less attractive.[226] Brody further comments "many would charge that the reason that research in primary care has low status and priority within the biomedical establishment is its past reliance almost exclusively on qualitative methods, and that only a strong and sustained quantitative turn can reverse its fortunes"(Brody, p. 126[227]).

However, as pointed out by McWhinney,[228]the debate over research methods is misleading because each has its strengths and weaknesses[a]. Brody goes on to argue that, "both qualitative and quantitative methods have appropriate applications in primary care research, even though in theory the latter better reflects the unique defining features of primary care" (Brody, p. 130[227]).

Recently, many researchers, such as Borkan;[229] and Creswell et al;[230] have suggested that integrating both qualitative and quantitative research design in a single study holds the potential of providing PHC research with the level of

---

[a] "There are many differences between methods of research other than whether they use quantification, and to suggest there is a strict dichotomy is misleading: many of us, for example, use both qualitative and quantitative methods in the same study. It is also misleading to think only in terms of two methods when there is in fact a continuum, ranging from classical experimental approaches, through descriptive research, to ethnographic methods. Furthermore, becoming overly concerned with names can lead to confusion, because there can be many names used for the same methods. It could be argued that it is not always necessary to give a method a name" (McWhinney, 1999, p: 1).

rigour that has been long pursued by PHC researchers.[a] A Mixed method approach is also important for research on patients' views because many commentators, such as Wensing and Elwyn;[14] Wensing and Elwyn;[28] Froberg and Kane;[231] Penelope;[232]; McIver;[233] have argued that the collection and synthesis of users' views on health care quality provides a rigorous methodological foundation. A Mixed method approach equips researchers with the methodological tools that will enable them to explore new ground from a pluralistic perspective, which may not be possible with a single method.

4.6. SAUDI ARABIA: LITERATURE ON PATIENTS' VIEWS

Interest in eliciting patients' views in Saudi Arabia is still developing and research on this area is still in its infancy. The analysis suggests there are two main reasons contributing to lack of interest in eliciting patients' views in Saudi Arabia. First, health care services in Saudi Arabia are primarily seen as welfare services; these include all hospital and PHC centres, military or civilian. This fact, among other factors, may cause health care planners in Saudi Arabia to marginalise patients' views and only concentrate on government strategies. Al-Shahrani comments:

> *"In Saudi Arabia, as in many developing countries, social science research may not be a popular endeavour for political reasons. As a result, health and social services are rendered to people without evaluating the successes or failures of services....the very few existing studies represent the point of view of health care administrators and health care professionals, who are usually the respondents in these studies. This may give a slanted picture, since these health administrations and professionals are employed by the government, which is represented by the Ministry of Health" Al Shahrani, p.5*[57]*).*

---

[a] Borkan notes "The promise of combined generalisability and contextual interpretive relevance, offered by comprehensive designs, may be the holy grail of research and too tempting to resist. Yet, as Creswell and colleagues have noted, and as a search of the literature confirms, relatively few primary care investigators have taken this path and few studies can be found" (Borkan, p.5[229]).

In Saudi Arabia, therefore, all initiatives concerned with improving services or expanding new ones are mainly based on the government's own strategies, and not influenced by or shared with patients[a]. This is not the case in other countries, where services are 'open to the private sector' which makes them 'highly competitive' and lends to concern about researching the health care system.[234]

Second, the impact of scientific research on developed countries' health care policies is far more influential than in developing countries, including Saudi Arabia. Atkinson and Haran cite Sitzia and Wood who reported that by 1994, the number of published papers on patient satisfaction in the US and the UK amounted to almost a thousand.[178] A MEDLINE database search by the researcher of this present study revealed that only 78 studies had been carried out on Saudi Arabian PHC services, 15 in Riyadh city.

More importantly, the impact of scientific research on Saudi health care policies, particularly research on patients' views, has not been fully examined. One explanation provided by Atkinson and Haran is that studies on patient satisfaction derived from developing countries either lack explicit focus on PHC or "tend to be descriptive, with only limited, ad hoc exploration of what influences variation in user satisfaction" (Atkinson and Haran, p. 502[178]).

Although a number of academic works have been carried out by Saudi PhD students (e.g. Al-Qatari, [235] Al-Shekh[236]), many of these, although helpful in looking at new issues in the Saudi health care system, have either failed to capture the dynamic of pluralistic views on quality, or have focused on a higher level of care, such as hospitals. In Saudi Arabia, even fewer studies have been

---

[a] More recently, Saudi health care planners and policymakers have started to become increasingly responsive to the importance of consulting patents' views and viewing patients as consumers. According to *Al-Jazirah* (a government newspaper), in 1994, the Saudi Arabian Ministers' Cabinet agreed to establish the Community-Patients' Friendship Society, whose duties include helping patients and giving advice to local healthcare authorities concerning local communities' health needs. Nevertheless, it is argued that this kind of Society is mere tokenism and has no real influence, either on the decision-making process or on the medical process.

undertaken within the Security Forces sector. Indeed, Al Shahrani's *"Expectations and Perceptions of Patient Satisfaction in a Saudi Arabian Hospital"* is the only example of this kind of work. Yet this study has been criticised for its overemphasis on 'technical processes'. Al-Shahrani carried out a study (n=315) in 1999 to examine the expectations and perceptions of patients in the MoI Security Forces hospital in Riyadh. His study adopted the market-developed instrument SERVQUAL to capture patient satisfaction. For the five aspects of quality of care he assessed (tangibles, reliability, responsiveness, empathy, and cultural issues) the average patient satisfaction score was 92%,[57] which confirms the theoretical and empirical weakness of satisfaction research discussed in section 4.5 of this chapter.

4.7. SUMMARY

This chapter has provided a historical and current account of the development of patients' role in health care. Recent changes in modern societies, as well as growing concern about economic costs, have forced health care organisations to introduce reform into their health care systems. Traditionally, the patient was seen as a passive and dependent partner in health care services. Nowadays, the patient's role within many health care systems has changed. Several social and economic factors have contributed towards the shift of power from doctors to patients.

The foregoing review of the literature on patients' role in health care indicates that history repeats itself. Despite the lack of empirical and theoretical studies from developing countries, emerging patterns in the literature suggest that what happened in Europe thirty to forty years ago is now occurring in developing countries. Saudi Arabia, for instance, is still applying the collectivist model of health care and growing concerns about the loss of power of the medical profession and bureaucratic managerial thinking generate opposition to change, including the move towards the quality era. Those sceptical about health care

professionals' motives accuse them of narrowing the focus of quality into issues concentrating purely on its clinical aspects, such as setting guidelines and indicators. This trend, according to Bower,[26] not only reflects the power of the 'evidence-based medicine paradigm' but also leads to the conceptualisation of quality as simply a reflection of expert opinion and judgment. Although professional views and inputs to the quality of care are undoubtedly central to quality improvement initiatives,[26] patients' power is also growing and they are demanding more involvement in health care policies.

Treating patients as consumers and focusing on their satisfaction as a goal for the health care organisation are extremely important. Evidence shows that satisfied patients are more likely to comply with their treatment procedures and develop long-term relationships with doctors than 'shop around for alternatives'.[237] Translating this into practice requires many steps, but responding to patients' views is central to this effort. In short, quality is better understood and assessed if patients' views on it are identified and addressed. Evidence has shown that patients are able to report and evaluate the care they receive.[19,26,27]

In the UK, the NHS has recognised the importance of reviewing its health care policies and introduced several new initiatives.[1] However, in Saudi Arabia in general, and in MoI health care services in particular, there is little evidence of the patients' role in health care policies. Anecdotal evidence suggests patients' views are not addressed in current policy-making in the kingdom and research is needed to empirically verify this.

The next chapter discusses the research methodology used in this thesis.

4.8. IMPLICATIONS OF THE LITERATURE REVIEW, AND ITS RELEVANCE TO THE SAUDI CONTEXT

The overall picture that can be deduced from the review of the literature provided in the first three chapters of this thesis is that PHC has become an integral part of many health care systems, including Saudi Arabia, and there is

much anticipation about the important role that PHC can play in promoting and coordinating efficient, effective and affordable health care.

Since it plays a central role, improving PHC quality is a necessity rather than an optional extra. The concept of quality of care originated from manufacturing quality but it dramatically differs in its intangibility and, above all, its multidimensionality: different people define, evaluate and prioritise it differently. Recent developments in this field suggest that a pluralistic approach to quality of care would be the most appropriate strategy to put all diverse views in one context. Advocates of the importance of eliciting patients' views on quality support their position with a number of research findings, e.g. that satisfied patients are likely to comply with treatment plans. Further, eliciting patients' views is important not only to understand their expectations, but their views are an essential and even exclusive source of information about accessibility or effectiveness of care.[21]

In Saudi Arabia, study of patients' views on quality has so far been a neglected area and little or no research has been carried out. Although PHC occupies an important role in the Saudi health care system, there is little evidence to suggest that PHC is socially accepted and accessible among communities. The very few studies that have been carried out have focused on patient satisfaction.[57,69,72,73,76] Moreover, most of these studies have been criticised, either for their lack of generalisability, or for employing standardised methodologies developed in other countries, which in most cases provide superficially high levels of satisfaction and neglect the aspects of quality that really matter to patients. They also rely too heavily on health care professionals' judgements about quality.[21,22,175,238]

Policy towards quality in Saudi Arabia, as in many countries, has been dominated by providers because of their powerful positions, and involving the patient in the policy-making process may be viewed as a threat to their positions. The pluralistic model of quality is novel to Saudi Arabia, where approaches to quality have been dominated by providers to the neglect of other people's views,

particularly the patient. Hence, in this study, a pluralistic approach is espoused, in order to attempt to capture the way patients view quality.

The review of the literature has equipped the study with an understanding of the methodological considerations attached to studying patients' views on health care services. Moreover, because, inevitably, research on patients' views and quality evaluation has come from Western literature, research strategies employed in Western studies have to be adapted to the context of developing countries. Hence, there is a profound need to develop a sensitive tool that is capable of capturing diverse opinions, but also sensitive to local needs.

In short, studying patients' views on quality is a new theme in Saudi Arabia and has the potential to greatly benefit large sectors of the Saudi community, including patients, managers and senior policymakers. Given the paucity of prior studies, an exploratory research approach is required to fill the present gap in the literature and pave the way for further research. Chapter 5 will present and discuss the research methodology.

CHAPTER 5. RESEARCH METHODOLOGY

5.1. INTRODUCTION

This chapter has two aims: to elaborate on the aims and objectives of the study and to provide an account of the study's design, research methodologies, and rationale for the choice of methods. It is divided into two main parts: the first explores the nature of social science inquiry and different research designs commonly practised in health care research. The second provides a detailed account of the design and rationale for this study and the empirical work undertaken. It uses a sequential and concurrent mixed-method strategy which combines qualitative and quantitative data.[204] The study setting, participants, sampling, data collection, and the processing and coding for both qualitative and quantitative phases are also described.

5.2. STUDY AIM

The study aims to explore patients' views and evaluation of PHC service quality in Saudi Arabia. An additional and complementary aim is to explore key health care providers' views on quality, and how patients' views are sought and processed in health service delivery. Data obtained from these key informants may serve to highlight mismatches and misunderstandings between the viewpoints of doctors, managers, and policymakers, and the actual views of patients. Thus, this is an empirical investigation designed to improve policy in practice, and to utilise what is learnt from the views of patients, doctors, PHC services managers and policymakers to enhance the quality of PHC services in Saudi Arabia.

5.3. STUDY OBJECTIVES

The previous review of the literature identified a range of important points that need to be explored. The first point is that there is consensus among commentators that quality is better understood and assessed if patients' views are identified and addressed. Evidence has shown that patients are able to report and evaluate the care they receive.[19,27,222] Thus, studying and addressing users' views on service quality is increasingly recognised as fundamental to quality improvement. In fact, many authors share Wensing and Elwyn's view that quality improvement efforts in health care may be wasted if patients' views are not addressed.[14] Although, at least in Western societies, research on patients' views on quality has intensified since the 1990s, and is increasingly seen as crucial to quality improvement initiatives,[16,28,203] this is a neglected research area in Saudi Arabia.

The second point is that Saudi Arabia has a number of distinct health care services serving different sectors of the population. The MoI is a military institute by nature but runs one of the largest health care service networks in Saudi Arabia. MoI health care services are accessible to military and civilian employees and their dependants, and continuous efforts are being made to improve the quality of these services. Research on patients' views on the military is generally limited and further research is needed.[70,239] Nevertheless, confining the study to the MoI alone would not be useful because findings might not be representative of the general population, since military employees differ socio-demographically from the general public. Hence, a comparison between MoI and MoH patients' views will be more helpful to claim generalisability and also to gain a thorough understanding of differences and similarities between patients' views in a military and general public setting.

Third, analysis of the literature indicates that quality is a multidimensional notion, perceived and evaluated differently by different stakeholders. Understanding what each group means by "quality" will help to identify

differences and similarities between their views, and may help future policymakers to synthesise these views to improve quality.

Fourth, little is known about patients' role in the Saudi health care system and how health care providers currently obtain and process patients' views in it.

The above four points emerging from the literature will therefore be explored in this study through four objectives:

Objective one:

> *"To assess patients' views on the quality of primary care in Saudi Arabia"*

Objective two:

> *"To compare the quality of PHC provided by the Ministry of the Interior with the Ministry of Health, as perceived by patients"*

Objective three

> *"To explore the views of doctors working in PHC, health service managers, and senior policymakers on the quality of PHC, and compare them with patients' views"*

Objective four

> *"To explore the extent to which doctors working in PHC, health services managers, and senior policymakers views about quality into account when making decisions about PHC services"*

5.4. SECTION ONE: SOCIAL SCIENCE ENQUIRY AND PRIMARY HEALTH CARE RESEARCH

"Research is the systematic and rigorous process of enquiry which aims to describe phenonema and to develop and test explanatory concepts and theories. Ultimately, it aims to contribute to a scientific body of knowledge. More specific, in relation to the focus of [health], it aims to improve health, health outcomes, and health services" (Bowling, p.1[240])

There are several ways in which the above objectives can be explored. This section intends to clarify the most appropriate methods to address the study objectives and to show how the choice of methods was informed by conceptual understanding of the advantages and disadvantages of qualitative and quantitative approaches and different philosophical assumptions underlying them.

Debate over the respective benefits of qualitative and quantitative methods is not new. Throughout the last century, a number of theoretical schools emerged, each claiming a different approach to what constitutes knowledge.[204] The claim of knowledge (ontology) in social science, as in any enquiry, should embody a particular philosophical knowledge of reality (epistemology) and of methods in which knowledge can legitimately be obtained from the world (methodology[204,241,242]) (see table 5.1). Hence, different perspectives on the concepts underlying epistemology and how research should be carried out form the core debate for the two rival research paradigms[a]: positivism and constructivism.[241]

---

[a] Sarantakos notes (p. 466[243]) that Kuhn defined paradigms "as the underlying presuppositions and world views scientists have of their discipline".

Table 5.1: Qualitative and quantitative paradigm assumptions

Assumption	Question	Quantitative	Qualitative
Ontological assumption	What is the nature of reality?	Reality is objective and singular, apart from the researcher	Reality is subjective and multiple as seen by participants in a study
Epistemological assumption	What is the relationship of the researcher to that researched?	The researcher is independent from that being researched	The researcher interacts with that being researched
Axiological assumption	What is the role of the values?	Value-free and unbiased	Value-laden and biased
Methodological assumption	What is the process of the research?	-Deductive process -Cause and effect -Static design-categories isolated before study	-Inductive process -Mutual simultaneous shaping of factors -Emerging design-categories identified during the research process
		-Context-free -Generalisations leading to prediction, explanation, and understanding	-Context-bound -Patterns, theories - developed for understanding
		-Accurate and reliable through validity and reliability	-Accurate and reliable through verification

Adapted from Creswell (p. 5[244])

Quantitative methods

Quantitative research is derived from positivist thinking, which claims that social phenomena follow social laws, just as physical phenomena follow physical laws, hence positivism as a conceptualist research approach holds that the logic of inquiry is almost the same in social science and physical science, and therefore scientists have to deploy scientific methods to reveal underlying laws.[242,243,245-247] Hence, within this approach researchers begin by deducing a theory and then conducting an empirical study to support or refute the theory. This approach follows deductive reasoning (also known as *theory-then-research* strategy).[245,248,249]

Qualitative methods

In contrast, qualitative research is derived from constructivist thinking, which is founded on the assumption that individuals, in their process of understanding the world and social life, develop experiences based on subjective meanings towards certain objectives and things.[250] Subjective meanings are the product of an embedded mixture of complex and multiple social, historical, and cultural norms and beliefs that are formed through the process of interaction with others.[204] This approach follows inductive reasoning and is known as the *research-then-theory strategy*.[248,249] Smith identified this approach as "the logical process of constructing knowledge about observed relationships between variables in particular instances"(Smith, p. 101[246]).

Both positivist and constructivist schools of thought, hence, inductive and deductive reasoning strategies, have attracted criticism. Inductive reasoning has been criticised for its lack of depth and its treatment of the observer as a non-active part of the observation process. Further, the research-then-theory approach has been criticised for its lack of validity and generalisability,[251-255] (not all commentators agree that qualitative research is not generalisable, see, for example, Morse[256]), and also for the time and effort spent on gathering data that may not be used to construct a theory.[257] On the other hand, the deductive approach has been criticised for its misleading findings. If the primary assumption of the theory being tested is wrong, then the findings will have no validity[a]. It is also criticised for not attempting to explore and introduce inventive knowledge and for focusing only on already existing knowledge. In addition, and, importantly, not all theories are easily tested.[257]

---

[a] The central thesis of this approach is that theory comes first followed by research.[246] For example, if we have a primary assumption that Adam is a man and a greater assumption that every man is a thinker, then the logical conclusion is that Adam is also a thinker.[246]

Mixed methods research approach

In response to criticism of inductive and deductive reasoning, pragmatism emerged as a theoretical perspective. According to Creswell, "pragmatism derives from the work of Peirce, James, Mead, Dewey and recently Rorty (1990), Murphy (1990), Patton (1990) and Cherryholmes (1992)" (Creswell, p. 10[204]). There are many forms of pragmatism but they all share the core assumption that knowledge is acquired out of actions, situations, and consequences rather than through antecedent conditions.[204,258] In other words, pragmatism is a problem-centred approach which gives priority to the problem rather than the methods used.[204] Pragmatism tends to utilise a mixed-methods technique as a pluralistic approach to derive knowledge about the problem.[204,258,259]

Since the 1960s, pragmatism has gained wider acceptance among commentators.[204,258] For instance, Frankfort-Nachmias and Nachmias dismissed the debate on whether the deductive or inductive reasoning approaches is appropriate since:

> *"clearly both strategies regard theory as a manifestation of scientific process. The real dilemma is over the place of theory in the research process. We contend that no dogmatic commitment to either strategy is necessary for the conduct of research. The social sciences have progressed in spite of this controversy, and scientific undertakings have been pursued under both strategies. In fact, theory and research interact continuously. Furthermore, as Ernest Nagel maintains, the contrast between the two strategies is more apparent than real" (Frankfort-Nachmias and Nachmias, p.47[245]).*

Moreover, Reynolds usefully suggests that an admixture between the "research-then-theory" and "theory-then-research" strategies can be advantageous in promoting thorough scientific understanding.[249] According to Reynolds, "A composite of these two strategies may provide a more efficient overall procedure and simultaneously provide a more accurate representation of the process that actually occurs in building scientific knowledge"(Reynolds, p. 154[249]). A composite approach will generate three different types of research: explanatory (sometimes known as causal) research, descriptive research, and exploratory research.[242,249]

In short, the mixed methods research approach is derived from the pragmatist perspective of knowledge, as identified by Creswell, and has three commonly used procedures, of which the two main ones are listed below:

- "Sequential procedure: the researcher seeks to elaborate on or expand the findings of one method with another method. This may involve beginning with a qualitative method for exploratory purposes and following up with a quantitative method with a large sample so that the researcher can generalise results to a population."

- "Concurrent procedure: the researcher combines quantitative and qualitative data in order to provide a comprehensive analysis of the research problem. "

(Cited from Creswell, p.19[204]).

Table 5.2 compares and contrasts the mixed methods strategy with the two traditional research designs. As this study will include qualitative research as a precursor to quantitative research, it follows a sequential procedure. Moreover, since qualitative data derived from key health informants is used as a stand-alone strategy and then compared to survey data obtained from patients, a concurrent procedure approach is employed. The following section discusses the strategies of inquiry derived from the above theoretical perspectives, and the rationale for the choice of study design and methods.

In summary, having discussed some of the common types of research strategies and their underlying theoretical perspectives that have been developed in the sphere of social science, it is important to stress here that each methodological approach has strengths and weaknesses, and the researcher's decision to choose a particular method(s) for a particular study will take into account a number of issues, including resources, but, most importantly, what he believes to be the best and most practical and ethical methods to achieve the research aims and objectives.

Table 5.2: Qualitative, Quantitative, and Mixed Methods Approaches

Tend to or typically	Qualitative Approaches	Quantitative Approaches	Mixed Methods Approaches
Use these philosophical assumptions	Constructivist/ Advocacy/ Participatory knowledge claims	Postpositivist knowledge claims	Pragmatic knowledge claims
Employ these strategies of inquiry	Phenomenology, grounded theory, ethnography, case study, and narrative	Survey and experiments	Sequential, concurrent, and transformation
Employ these methods	Open-ended questions, emerging approaches, text or image data	Closed-ended questions, predetermined approaches, numerical data	Both open-and closed-ended questions, both emerging and predetermined approaches, and both quantitative and qualitative data analysis
Use these practices of research, as the researcher	Positions himself or herself, Collects participant meanings, Focuses on a single concept or phenomenon, Brings personal values into the study, Studies the context or setting of participants, Validates the accuracy of findings, Makes interpretations of data, Creates an agenda for change or reform, Collaborates with participants	Tests or verifies theories or explanations, Identifies variables to study, Relates variables in questions or hypotheses, Uses standards of validity and reliability, Observes and measures information numerically, Uses unbiased approaches, Employs statistical procedures	Collects both quantitative and qualitative data, Develops a rationale for integrating the data at different stages of inquiry, Presents visual pictures of the procedures in the study, Employs the practices of both qualitative and quantitative research

Adapted from Creswell (p.19[204])

5.5. RATIONALE FOR THE CHOICE OF THE STUDY DESIGN AND METHODS

This study aims to use a pluralistic approach to elicit the views of patients and key health care stakeholders on the quality of PHC services. Hence, the research design chosen for the present study follows a mixed methodology approach in which both qualitative and quantitative techniques for data collection and analysis are utilised, especially since this mixed approach has been employed by different research groups and institutes who "broadly approve of combining qualitative and quantitative methods in public health research" (Creswell, p.8[230]). Moreover, Borkan states that a mixed methodology "is uniquely applicable to the complexity of primary care research and offers a powerful potential for instrument design" (Borkan, p.5[229]).

A mixed methodology approach is based on the assumption that collecting different types of data can provide a better understanding of the research problem.[204] This corresponds closely with the core argument of this thesis, which stresses the importance of utilising a pluralistic approach in measuring quality in health care.

Patients' views have traditionally been gathered using a survey which is commonly criticised on a number of grounds, but particularly in relation to the risk of researchers imposing their own agenda, by selecting for inclusion items which may not reflect patients' perspectives in the area under examination. Therefore, in this study the items included in the survey emerged from prior interviews with patients, which offered thorough insight into the area under examination, by identifying those issues which patients themselves felt were related to quality.[254,260] Moreover, they allowed patients as informants the opportunity to discuss their viewpoints and experiences. Hence, the qualitative phase led to the quantitative phase, further emphasising the suitability of a

mixed methodology in this study as it "lent itself to valuable opportunities for data triangulation and transformation and instrument design" (Borkan, p. 4[229])

The selection of the methodology strategy for this study took account of the above issues and the study's four objectives which involve two groups of people: (i) patients, and (ii) health care informants (doctors, PHC service managers, and policymakers). The methods selected for this study are presented below.

Methods' strategy to elicit patients' views

Given the exploratory purpose of this study, the research design for eliciting patients' views will adopt a ***sequential mixed-methods design*** in which both qualitative and quantitative data collection methods are utilised. The purpose of this two-phase, sequential mixed-methods approach, as mentioned above, is to explore patients' views with the intent of using data derived from this phase as a precursor to develop a cross-sectional survey using a larger sample from the two populations in this study.

Therefore, the first phase will be a qualitative exploration of patients' views on PHC and its quality. Themes emerging from the first phase will then be developed into an instrument (or an existing instrument extended) so the study objectives can be achieved. The rationale for using a sequential mixed-methods strategy is that a survey of patients' views on quality can best be developed only after a preliminary exploration of patients' views.[204]

Methods for eliciting the views of key health care providers

The views of key health care providers are explored using a concurrent mixed-methods design. In the initial phase, qualitative semi-structured interviews are conducted with health care providers. Data derived from this stage is used at two levels:

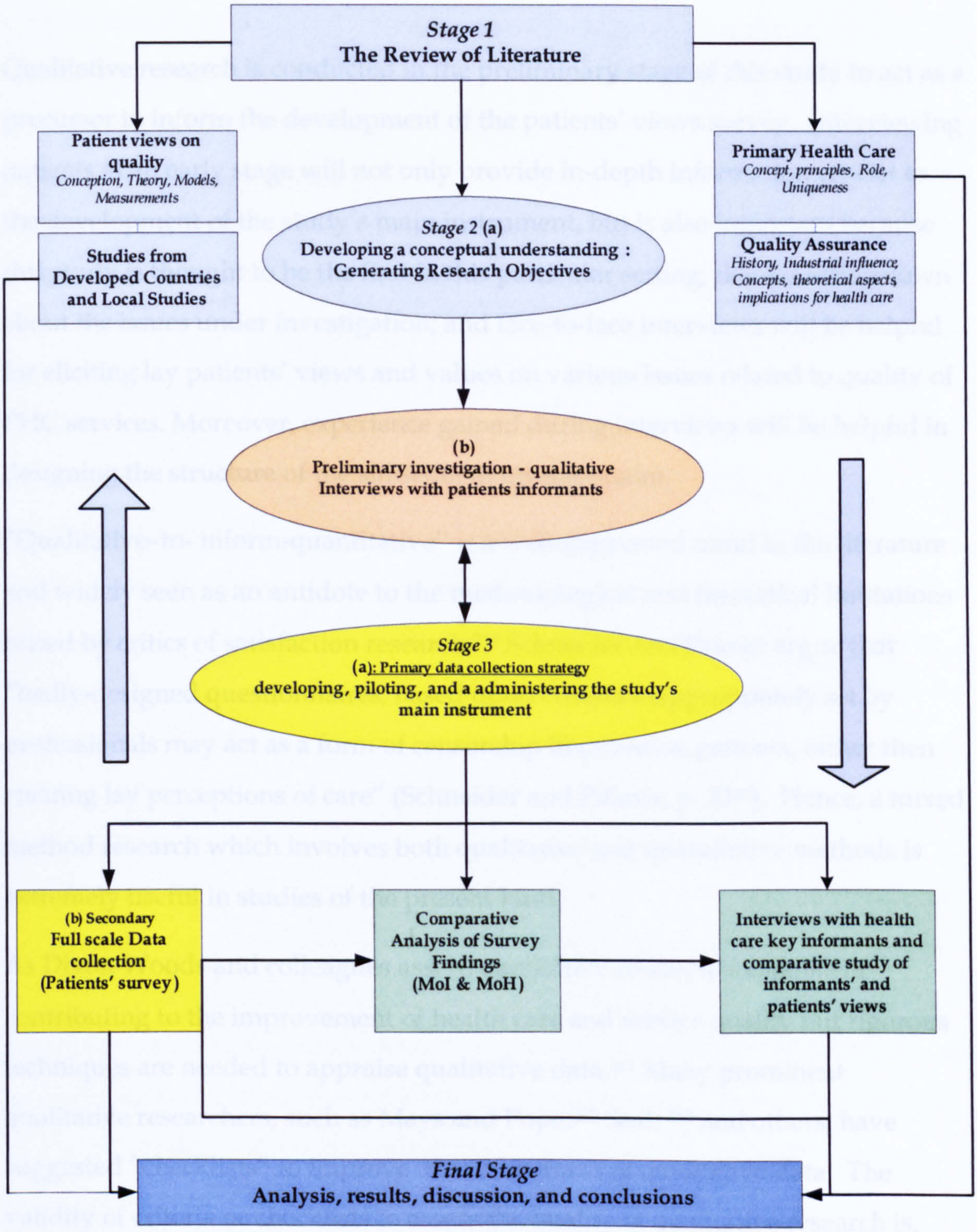
- As a stand-alone type of process analysis.
- As a basis to identify similarities and differences between the views of patients and health care providers, as obtained from interviews

In short, this study research design involves three main stages:

- Qualitative interviews with patients
- A cross-sectional survey of patients.
- Qualitative interviews with key health care providers.

Findings from stages one and two are then combined with the findings from stage three. Figure 5.1 presents a summary of the research strategy design in relation to each objective.

Figure 5.1: Overall research design



5.6. PRELIMINARY PHASE: QUALITATIVE INTERVIEWS WITH PATIENTS

Qualitative research is conducted in the preliminary stage of this study to act as a precursor to inform the development of the patients' views survey. Interviewing patients at an early stage will not only provide in-depth information crucial to the development of the study's main instrument, but is also important because this study is thought to be the first in this particular setting; there is little known about the issues under investigation; and face-to-face interviews will be helpful for eliciting lay patients' views and values on various issues related to quality of PHC services. Moreover, experience gained during interviews will be helpful in designing the structure of the subsequent questionnaire.

"Qualitative-to- inform-quantitative" is a well-supported trend in the literature and widely seen as an antidote to the methodological and theoretical limitations raised by critics of satisfaction research.[233] Schneider and Palmer argue that "badly-designed questionnaires, based upon criteria inappropriately set by professionals may act as a form of censorship imposed on patients, rather then eliciting lay perceptions of care" (Schneider and Palmer, p. 33[20]). Hence, a mixed method research which involves both qualitative and quantitative methods is extremely useful in studies of the present kind.

As Dixon-Woods and colleagues assert, qualitative research is capable of contributing to the improvement of health care and service quality but rigorous techniques are needed to appraise qualitative data.[261] Many prominent qualitative researchers, such as Mays and Pope;[262] Seal; [263] and others, have suggested "checklists" to improve the robustness of qualitative data. The validity of criteria or checklists to assess the quality of qualitative research is, however, debated, since there is no agreement on which checklist is more appropriate for producing good quality qualitative research.[264] Hence, most qualitative researchers are cautious about their use. Chapple and Rogers argue that wide proliferation of checklists and guidelines may discourage health care

professionals from conducting qualitative research, or at least inhibit creativity and imagination.[265] Hence, many qualitative researchers are sceptical of the usefulness of fixed checklists. [264] Barbour, for example, states "Reducing qualitative research to a list of technical procedures (such as purposive sampling, grounded theory, multiple coding, triangulation, and respondent validation) is overly prescriptive and results in "the tail wagging the dog"" (Barbour, p.1115[266]). This study does not intend to use a fixed checklist, nevertheless, as Barbour indicates, issues such as purposive sampling and grounded theory will not confer rigour unless they are "embedded in a broad understanding of qualitative research design and data analysis" (Barbour, p.1117[266]).

5.6.1. Patients as informants: selection of patients/ sample size

Qualitative studies usually use a much smaller sample size than quantitative studies.[208,267] As Barbour points out, this is because "rather than aspiring to statistical generalisability or representativeness, qualitative research usually aims to reflect the diversity within a given population"(Barbour, p. 1115[266]). Moreover, qualitative data is time-consuming and expensive to acquire, transcribe, and analyse.[207] Nevertheless, a range of different sampling techniques are available for qualitative researchers which include: convenience sampling, purposive sampling, "snowballing" and theoretical sampling.[204,240,243] Patients interviewed in this study were selected using the purposive sampling technique. Purposive sampling increases the diversity of samples and enables the investigator to search for different properties. Seventeen patients were invited to participate, ten of whom agreed and were interviewed face-to-face by the researcher in the city of Riyadh in March 2003. Individuals invited to participate were chosen from different backgrounds (i.e. to be representative of different military ranks, genders, age-groups, etc., see table 5.3 for patient informants' characteristics) and asked for their views on the quality of health care services provided by the Ministry of the Interior PHC services.

5.6.2. Interview schedule

Interviews followed a schedule and were tape-recorded and limited to 60 minutes.[268] The purpose of face-to-face interviews with patients was to gain in-depth qualitative data about how they viewed the quality of services provided for them. The interview used the format of open-ended questions, and was divided into four parts:

- To elicit their spontaneous view, informants were asked very general questions (i.e. general views on PHC in Saudi Arabia), how they viewed quality and what they considered good or bad quality.
- Informants were introduced to specific quality attributes identified in the literature, particularly quality attributes identified by the General Practice Assessment Survey (GPAS).
- Participants were asked about issues relating to their involvement in health care, for example, their participation in decision-making. They were also asked whether they thought their views were taken into account, whether they wanted their views to be taken into account, and what they thought barriers or incentives to quality care might be.
- Finally, participants were asked to submit remarks and suggestions as to what they would do if they were managers of a primary care centre (a copy of the interview schedule is attached in appendix A).

For ethical reasons, all patients received a letter signed by the researcher, explaining the goal of the interview and assuring them of the confidentiality of their responses.

As regards interviewing female patients, it is not possible in some Islamic states, especially Saudi Arabia, to conduct face-to-face interviews with the opposite gender. In the present study, the researcher had to obtain permission from the male relative/partner of female patients before conducting the interview. A danger of bias also existed if the male relative/partner decided to attend the subject during the interview process and intervene when questions were posed.

To overcome this problem, the researcher tried different negotiation techniques, including asking non-Arabic-speaking nurses (the MoI employs thousands of nurses from India, Bangladesh etc. in its health care centres) to attend interviews conducted with female participants.

5.6.3. Characteristics of informants

In total, ten informants participated in this part of the study. Informants' ages ranged from 24-59, the average age being 34.6 years (table 5.3). Six informants were male and four were female. Informants' educational level fell within four groups: illiterate, elementary education, high school education, and university education or higher. Five informants had a university degree or higher, two had had a higher school education at the time of the study, another two had received elementary education, and one was illiterate. Eight were married, one was single and one was widowed. Six informants were military personnel (2 soldiers, 4 officers), one was a civilian, and three were unemployed. Seven informants were interviewed in the Special Security Forces Primary Health Care Centre and the remaining three were interviewed in the General Directorate of the Border Guard Primary Health Care Centre. Five informants considered themselves frequent visitors to their primary health care centre, whereas the other five viewed themselves as infrequent visitors. The following table details the sociodemographic characteristics of informants.

Table 5.3: Informants' socio-demographic characteristics

Interviewee code	Location	Gender	Age	Employment status/ Rank	Marital status	Frequency of visits to the PHC	Educational level
P1	Special Security Forces' Primary Health Care Centre	Male	42	Officer - Major	Married	Not a frequent visitor	Master degree
P2	The General Directorate of the Border Guard Primary Health Care Centre	Male	55	Officer- Brigadier	Married	Not a frequent visitor	University education
P3	Special Security Forces' Primary Health Care Centre	Female	26	Teacher- wife to an officer	Married	Not a frequent visitor	University degree
P4	Special Security Forces' Primary Health Care Centre	Male	37	Military- Private Soldier	Married	Frequent visitor	High School degree (A level)
P5	The General Directorate of the Border Guard Primary Health Care Centre	Male	59	Officer- Lieutenant Colonel- Engineer	Married	Frequent visitor	University degree (Engineering)
P6	Special Security Forces' Primary Health Care Centre	Female	45	Housewife- wife to a military Sergeant	Married	Frequent visitor	Elementary education
P7	Special Security Forces' Primary Health Care Centre	Male	37	Military- First Soldier	Married	Not a frequent visitor	Elementary education
P8	The General Directorate of the Border Guard Primary Health Care Centre	Male	57	Officer- Brigadier General	Married	Frequent visitor	University degree
P9	Special Security Forces' Primary Health Care Centre	Female	24	Student- father in the military	Single	Not a frequent visitor	At university
P10	Special Security Forces' Primary Health Care Centre	Female	54	House wife- husband was in the military	Widow	Frequent visitor	Illiterate

5.6.4. Data analysis

Qualitative data analysis is an iterative procedure.[204,252] Data analysis starts from the moment the analyst transcribes, listens, and reads interviews. In this study, the researcher had the opportunity to become well-acquainted with his data, as he interviewed, transcribed verbatim,[268] and translated all interviews himself. The researcher also read the text and listened to the tapes many times to ensure he was thoroughly familiar with the material, prior to identifying categories using the constant comparison method. Based on the grounded theory principles developed by Glaser and Strauss,[269-271] the constant comparison method was important for this study because the researcher had to develop,[a] using patients' own views on quality, a holistic perspective of the current situation and use these views to identify emerging patterns and develop a theory.[252,273,274] The constant comparison technique was adopted for constant comparison of emerging patterns and categories.[208,267,275] As Glaser and Strauss note,[269] using the constant comparative method involves four stages:

- Comparing incidents applicable to each category.
- Integrating categories and their properties.
- Delimiting the theory.
- Constructing a theory.

In this study, the last two stages of Glaser and Strauss' approach were not used because of its exploratory nature. Developing and obtaining an in-depth understanding of lay Saudis' views on primary health care and its quality was the main focus of this study. Thus, the researcher applied the first two stages only in this research. The first stage, 'comparing incidents applicable to each

---

[a] According to Charmaz, "the term "grounded theory" refers to both a method of inquiry and to the product of inquiry. However, researchers commonly use the term to mean a specific mode of analysis" (Charmaz, p507[272])

category', was conducted using manual and electronic techniques. First, when the English transcript was completed, the researcher used a hard copy of it to manually identify broad 'in vivo' and 'open codes'. This stage involved using coloured highlighters and writing notes in the margins of transcripts, referring to the field memos taken earlier. It also included identifying differences and contradictory views among informants.

A crucial component of the constant comparison method is a systematic search for views, particularly contradictions (deviance) and cross-indexing them with the rest of the data to identify explicit or hidden similarities. After this preliminary stage, the data was uploaded into Atlas.ti 4.2 software for further analysis.[276] Atlas.ti is one of the many available qualitative data analysis software programs, and is regarded as a valuable tool in qualitative research (although an ambivalent attitude has been reported among some authors towards the use of computer software tools in qualitative research, for example, Rice and Ezzy.[221]

The researcher used Atlas.ti to obtain a thorough analytical view of the data and its relation to identified codes.[274] The constant comparison method enabled the researcher to constantly compare new emerging codes with existing codes and establish a conceptual link between codes. This initial stage produced a wide range of codes. Appendix (B) presents detailed computer output tables which illustrate primary codes and categorical codes. A network diagram is also presented in the appendices (C) to show the conceptual links between the main codes. Codes under each category were grouped into three major thematic sections, namely: primary care, quality in health care, and patients' views on quality attributes. Codes under the thematic section 'quality attributes' were grouped into fourteen quality scales, ten had been originally introduced to patients in stage three of the interview schedule and four new quality scales emerged from the data. Chapter six will discuss these at length.

5.7. PHASE 2: QUANTITATIVE METHODS

5.7.1. Design

Survey research using questionnaires has a long history in social science. Although questionnaires are criticised for their lack of depth, they are excellent tools for measuring attitudes and orientations.[273,277] However, the value of the questionnaire relies on the design of questions and how well questions achieve the study objectives and answer the research questions.[206,278] Cross-sectional survey design is predominant in social science research. [242,245,279] This is because this design captures data that allows researchers to observe relationships between "properties and dispositions"[a] (i.e. dependant and independent variables[245]). Compared to other survey designs, such as longitudinal design, cross-sectional studies allow researchers to obtain a snapshot of a particular time for the population studied.[280] Thus, cross-sectional studies are timesaving and economical. Giving cross-sectional survey design's ability to capture variations between respondents and examine "property-disposition relationships", the chosen design for this study was a cross-sectional survey.

Questionnaires can be administered in many different ways, but in this study, the self-administering technique was adopted (mainly because of the cost involved and the unreliable mailing system in Saudi Arabia). Questionnaires were administered to patients who consecutively attending MoI and MoH primary care centres. The questionnaire was first piloted among a small group of patients in order to ensure its readability and clarity. The questionnaire was translated into Arabic because the vast majority of the target population were Arabic native speakers. Several steps were taken to ensure accurate translation as will be detailed later in this chapter (section 5.7.9).

5.7.2. Setting

Ministry of the Interior PHC centres

Riyadh is the capital city of the Kingdom of Saudi Arabia and is the administrative centre for the Kingdom. MoI health care departments and the MoI's main hospital are based in Riyadh, but there are many primary health care centres outside the capital. There are 69 primary care centres in total belonging to the MoI (including those in prisons), 11 of them in Riyadh city.[56] This study chose six of the primary care centres in the city of Riyadh. The other five could not participate in this study one is located in the Ministry of the Interior's main building and accessible only to Minister of the Interior personnel and top ranking officers. The remaining four are located in the Secret Intelligence Department and entry is highly restricted. Moreover, in terms of design, facilities and population served, the centres in Riyadh are almost identical to those outside Riyadh, so the study findings can be generalised to other centres. The MoI primary care centres are mainly based inside military barracks or their surrounding areas. The following table describes the general characteristics of the six primary health care centres included in this study.

---

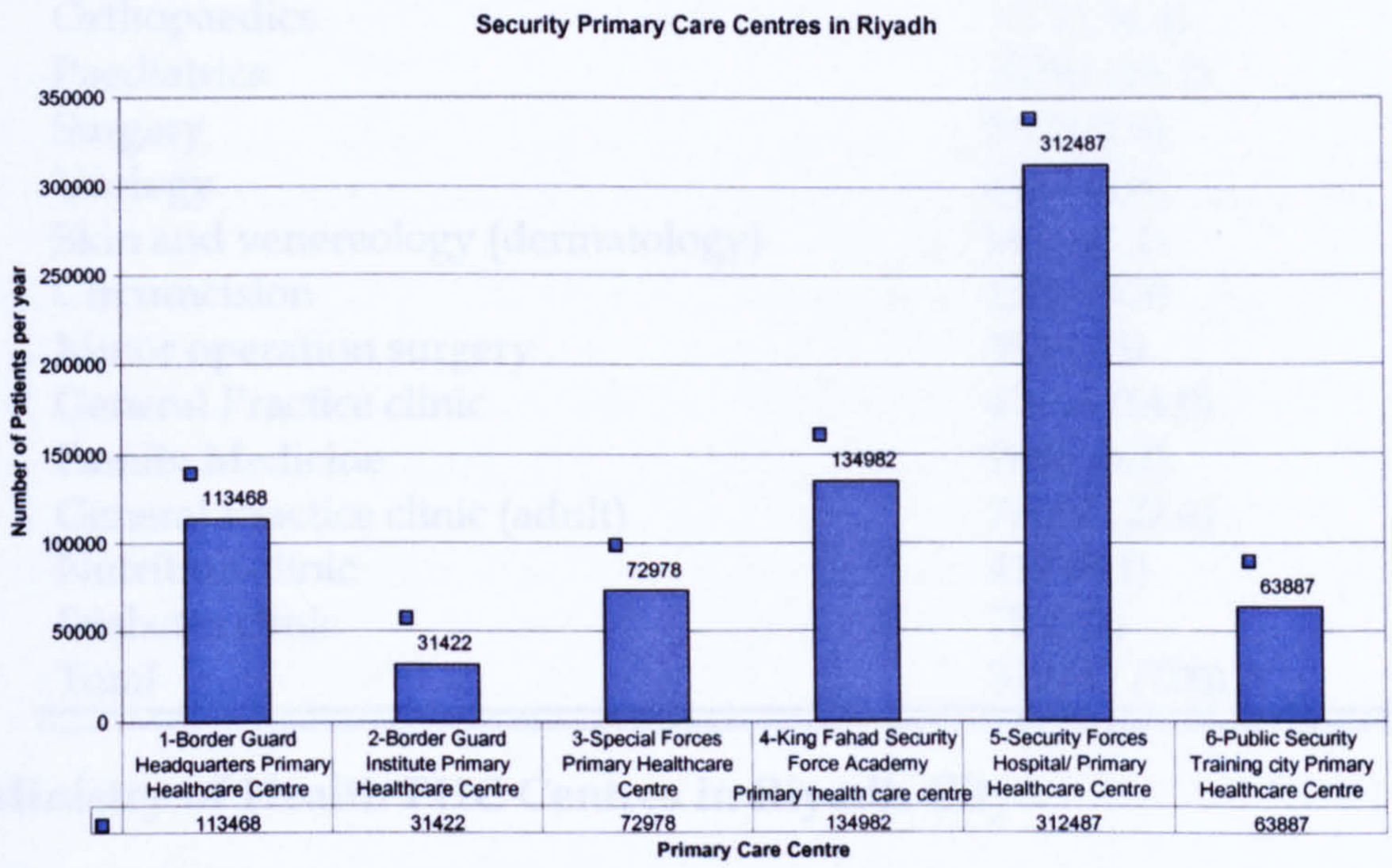
a "A property-disposition relationship is the relationship between some characteristic or quality of a person (*property*) and a corresponding attitude or inclination (*disposition*)" (Frankfort-Nachmias and Nachmias, p. 127[245])

Table 5.4: Number of cases seen in 2001 at the six MoI centres participating in this study

Primary Care Centres' Names	Number of consultations in 2001
	n (%)
1-Border Guard Headquarters Primary Healthcare Centre	113468 (15.6)
2-Border Guard Institute Primary Healthcare Centre	31422 (4.3)
3-Special Forces Primary Healthcare Centre	72978 (10.0)
4-King Fahad Security Forces Academy Primary Healthcare Centre	134982 (18.5)
5-Security Forces Hospital/ Primary Healthcare Centre	312487 (42.8)
6-Public Security Training City Primary Healthcare Centre	63887 (8.8)
Total	729224 (100%)

**Source: The General Directory of HealthCare Services 2001 Statistical Report*[56]

Figure 5.2: Number of patients who received care at MoI PHCs in 2001



The bar chart above shows that the Security Forces Hospital/ PHC Centre is the largest primary care centre in terms of the population it serves. This is due to two main factors summarised below:

- This particular PHC centre is the largest in the capital city of Riyadh and is also attached to the MoI's only hospital.

- This PHC centre is the only one in the MoI health care network to have extensive personnel and equipment resources, making this particular centre popular with patients (any Security personnel can access this primary care centre, regardless of where s (he) actually lives).

Like other MoI PHC centres, the Security Forces Hospital/ Primary Healthcare Centre has its own laboratory and X-ray facilities.

Table 5.5: List of specialist clinics and number of cases seen in them at the Security Forces Hospital/ PHC centre in 2001

Clinic	Number of consultations in 2001
	n (%)
Ear, Nose and throat (ENT) clinic	13470 (4.3)
Dressing services	21949 (7.0)
Internal medicine	12282 (3.8)
OBS/GYN	39967 (12.4)
Eye clinic	9883 (3.2)
Orthopaedics	13711 (4.4)
Paediatrics	50391 (16.1)
Surgery	8169 (2.6)
Urology	6440 (2.6)
Skin and venereology (dermatology)	9628 (3.1)
Circumcision	1588 (0.5)
Minor operation surgery	105 (.08)
General Practice clinic	43636 (14.0)
Family Medicine	9884 (3.2)
General Practice clinic (adult)	70897 (22.6)
Nutrition clinic	412 (0.1)
Diabetes clinic	75 (.02)
Total	312487 (100)

Ministry of Health PHC Centres in Riyadh City

The research will undertake a comparative study of six primary healthcare centres belonging to the MoH which are accessible to the general public. Statistics show that the number of MoH PHC centres around the Kingdom in 2002 was 1791, of which 312 were located in 'greater Riyadh' and its surrounding towns. In Riyadh city, there were 67 PHC centres and six of these centres were randomly selected for participation in this study. In terms of structure, facilities, and management, participating MoH PHC centres were

very similar to those operated by the MoI. Each PHC provides, on average, health services to 8728 registered persons (catchment area).[281]

Table 5.6: MoH Primary Healthcare Centres included in this study

Primary Care Centres' Names	Number of consultations in 2002
	n (%)
1-Al-Mursalat Primary Care Centre	42120 (15.3)
2-Salah Al-diean Primary Care Centre	34200 (12.5)
3-Al-Aulia Wal Sulimaniah Primary Care Centre	52200 (19.1)
4-King Fahad's Neighbourhood Primary Care Centre	40680 (14.8)
5-Al-Rabuah Primary Care Centre	58350 (21.3)
6-Al-Muhamadia Primary Care Centre	46800 (17.0)
Total	274350 (100%)

Table 5.7: Range and number of health care personnel working at the MoH's 312 PHC centres in 'greater Riyadh' and its surrounding towns

Specialty	Male	Female	Total
Dentistry	70	68	138
OBS/GYN	1	4	5
Paediatrics	2	3	5
General Physicians	579	318	897
Other	20	15	35
Nurses	589	1125	1714
Allied health personnel	887	217	1104
Technical personnel	23	0	23
Administrative personnel	295	79	374
Workers	1397	774	2171

5.7.3. Participants

The population of this study comprised all patients registered with the 12 primary health care centres included in this study (6 belonging to the MoI and 6 to the MoH). Thus, all patients registered at any of the 12 primary health care centres seeking primary care during the four-week period of the study were eligible for inclusion in this research. However, due to ethical considerations, the study excluded patients under 18 years of age (legal accountability is eighteen years in Saudi Arabia) and patients with mental illness. Assistance was given to participants with reading and writing difficulties.

5.7.4. Recruitment and survey administration

For practical and efficiency reasons (i.e. resources constraints, the researcher had to travel back to Saudi Arabia and carry out this field work within a relatively short time period), the time-span allocated for patients' survey questionnaire administration was three days a week at each centre over a four week period (Saturdays, Mondays and Wednesdays at the MoI's PHCs, and Sundays, Tuesdays, and Thursdays at the MoH's PHCs). Questionnaires were administrated to patients while they were in the waiting area and before they were seen by their doctors because the GPAS is designed to measure patients' overall experience and views about the service generally, not about a particular visit or particular doctor. In accordance with GPAS protocol,[282,283] questionnaires were given to receptionists who were asked to hand them out on the specified days to the first 10 consecutive patients who approached the reception desk and agreed to participate in the study. This helped the receptionist register and keep track of all the questionnaires, using a form designed by the researcher. When the daily allocation of questionnaires had been distributed, receptionists stopped handing out further copies until the next day. The process for administering the questionnaire raises a number of issues which are discussed in chapter nine, section 9.2.

During questionnaire administration the researcher had to address several important issues, for example, gender sensitivity. Islamic and traditional values are deeply embedded in Saudi Arabian culture. Gender segregation is strictly imposed in most public places, including waiting rooms in primary care centres. As a member of the Saudi community, the researcher was fully aware of the behavioural constraints which necessitated him taking certain steps to ensure community acceptance and support. Accordingly, copies of the study questionnaire were sent to the female sections in each primary care centre. The researcher's wife, also a postgraduate student in the UK, provided extensive assistance at this stage by liaising between the female sections and the researcher. She also offered support to female patients with special needs or

with reading or writing problems, helping them to complete the questionnaire, especially in PHC centres lacking adequate numbers of Arabic-speaking nurses.

5.7.5. Sampling

Random sampling is perhaps the best example of probability sampling, because it is likely to yield a representative sample of the population, has the least bias, and offers the most generalisability.[206,243] Pragmatically, it would seem that simple random sampling is the best design for any research, but this is not always the case. When deciding which sampling design is the most appropriate for their research, researchers' decisions, in most cases, are influenced by many factors, including the nature of the research, its aims and objectives, the target population, and the constraints of time and resources.

A variety of other sampling designs are available, for example, systematic sampling, stratified random sampling, area sampling, double sampling, and cluster sampling.[240,273,284] In this study, simple random sampling, despite its popularity and potential usefulness, was not chosen because of the clustered nature of the study population. The study population was grouped into different primary health care centres (PHCs) operated by two different health care service providers (MoI & MoH), and scattered in various parts of Riyadh city. The classified sampling design in this study used multi-stage cluster sampling because the unit of sampling was at the PHC centre level rather than the patient level. Improvement interventions, such as quality programmes, are likely to be implemented at the intact organisational level, rather than at the individual level and, hence, patients within each PHC centre are likely to be similar to each other, and all will be affected by the quality of care in that centre, therefore, results will be clustered by centre. In other words, members of each group (in-clusters) are highly likely to be homogeneous in terms of vested interests, orientation, values, philosophy, and views of health care services. In contrast, groups (clusters) are heterogeneous.[285-288]

In this regard, Cosby et al. commented,

> *"Often, patients within the same practices or clusters are more similar to each other, with respect to key confounders or the outcomes of interest, than to patients in other practices. For example, the management of patients with a given condition by the same physician is more likely to be similar than the management of patients with the same condition by a different physician"(Cosby et al., pp.77-78[286]).*

Recognition of the clustered nature of this study's population, utilisation of the clustered sampling technique, and awareness of implications for statistical analysis were crucial to address the statistical challenges. A study can lose its power to detect variance between patients within each cluster because patients in this case are dependent on each other.[285,287-290] Donner and Klar indicated that dependence increases "the ratio of between-cluster to within-cluster variability, reducing the effective sample size and increasing the variance of the estimated effect of treatment" (Donner and Klar, p.38[291]). Ignoring this can result in statistical bias, since the estimated standard errors may be too small if the study does not take into account clustering in the data. Further, this will eventually lead to confidence intervals that are too narrow, and p-values that are superficially too small.[289,291-294]

However, although the cluster sampling technique has the advantages of being convenient, less expensive to conduct and, most importantly, capable of including cluster level outcomes and cluster level confounders, not possible using random sampling techniques,[295] many shortcomings and limitations have been pointed out; in particular, cluster sampling is not as powerful as random sampling, because it exposes itself to potential biases since a possible high ratio of variability between clusters and within clusters may affect generalisability. As Sarantakos indicated, "cluster sampling is biased by the fact that the respondents come from a specialised population group (dictated by the choice of clusters) and may not, for that reason, represent the whole spectrum of the population" (Sarantakos, p.146[243]).

Ukoumunne et al. (p.1[295]) also highlighted three disadvantages attached to cluster sampling: 1- the level of intervention may differ from the level of

evaluation; 2- There may be a small number of units of intervention (cluster); and 3- outcomes of individuals are often correlated within clusters. Further, statistical challenges should be considered when analysing cluster sampling because individuals are not wholly independent.[241]

Since the 1970s[a], there has been much critical discussion of simple random sampling and its appropriateness in situations where the population is clustered into units and the level of sampling is not at the individual level.[297] This has led to constant scrutiny of clustered sampling and many developments have been made with regard to the rigorousness of sample size calculation and clustered data analysis. Subsequent sections will discuss some important issues related to cluster sampling: cluster sampling statistical implications (Appendix D presents a sample size calculation and mathematical equations to account for the clustering effect). Section 5.7.13 will deal with implications for statistical analysis.

Cluster sampling: statistical implications

The issues raised in the last section relating to the drawbacks of cluster sampling are well recognised in the literature, particularly in the field of epidemiological research. They have led to the development of robust statistical adjustments to overcome clustering effects.[287,288,298,299] Advances in software programming have produced sophisticated software capable of handling complex data analysis. Statistical software packages, for example, STATA, SAS, MLwiN, and other software packages, have helped researchers overcome serious statistical difficulties associated with cluster sampling.

Generally speaking, there are two areas of cluster sampling which raise statistical concerns: sample size calculation and cluster data analysis.

---

[a] For a detailed account of the history of cluster randomised trials, see Donner and Klar, p. 40[291] and Armitage, 1972.[296]

Techniques for estimating sample size for studies which sample groups of people in clusters (for example, schools, hospitals, primary healthcare centres) rather than individuals, are well established. However, most texts do not discuss them.[299] Cosby et al. (p.78[286]) illustrated the technical consideration attached to employing cluster sampling design and suggested that lack of efficiency in cluster sampling design is due to loss of power resulting from greater homogeneity of members in one cluster (PHC). They suggested that for such limitation to be minimised, a compensatory inflation (inflation factor) of sample size is required to maintain power in cluster sampling.

This procedure is statically known as the "design effect", and the Intracluster Correlation Coefficient (ICC) (known as ρ (roh) is used for a robust design effect calculation. Cosby and colleagues define both 'design effect' and 'ICC' as follows: Design effect is "the ratio of the total number of subjects required using cluster randomisation to the number required using simple randomisation"; and ICC is "the ratio of between-cluster variance to total variance" (Cosby et al., pp. 77-78[286]). An ICC of zero value indicates that people in one cluster are completely independent, while an ICC of 1.0 value indicates that people in that cluster are identical, but this does not apply to different clusters as they may be different.

Valid estimate of ICC is essential to determine the size of the inflation factor or design effect. However, estimating the exact ICC is not always easy. Bland asserts that "the main difficulty in calculating sample size for cluster randomised studies is obtaining an estimate of the between cluster variation or ICC" (Bland, p. 346[287]). Campbell et al. further comment, "little empirical evidence is available on their likely size, and on factors which influence their magnitude" (Campbell et al., p. 12[300]). According to Killip et al.[290] in human studies the value of ICC ranges from 0.01 to 0.06. Moreover, while some suggest researchers should refer to the literature to obtain an ICC estimate, other commentators warn that studies that use cluster as the unit of randomisation may not publish the ICC estimate in their results.[287,291]

With specific reference to primary health care research, Campbell et al.[288] indicate that estimates of ICCs vary according to two factors, namely, setting (primary or secondary care) and type of outcomes. Hence, estimates of ICCs for process variables have been identified by Campbell et al. to be higher than those for patient outcomes. Campbell et al. estimate ICCs for primary care process variables to be between 0.05-0.15 and patient outcomes in primary care to be generally less than 0.05. An alternative method for obtaining a valid ICC value is calculating the ICC using data from pilot studies. Bland (p.344[287]) provides a comprehensive account of ICC calculation using data from pilot studies through mathematical equations. However, in the UK, attempts are being made to build up a national database for ICC estimation (see Ukoumunne et al., p.61[295]). In this study the ICC value is estimated to be 0.01, which is similar to other multi-site studies that have used patient satisfaction questionnaires.[295]

In summary, provided that statistical implications are robustly addressed, the advantages of cluster sampling far outweigh the disadvantages described earlier. Moreover, the researcher's judgement about utilising cluster sampling has to be strictly influenced by the nature of the population setting and research needs. Researchers have to be aware of the strengths and weaknesses of cluster sampling because a failure to address clustering issues may lead to questionable study findings.

5.7.6. Recruitment of the research team

MoH and MoI health care officials sent formal requests to the managers of PHCs participating in this research, asking them to assist the researcher in his fieldwork activities, namely: questionnaire administration and data collection. Fieldwork activities were pre-planned to allow the researcher to embark on more than one activity at the same time. For instance, while the questionnaire was being reviewed by the translation committee (see section 5.8.1), the researcher engaged in final preparations for the full-scale administration of

questionnaires to patients. Nurses and receptionists allocated by each primary care manager to help the researcher were given two days training for questionnaire administration. Although some of the nurses and receptionists involved in this study had been previously involved in similar studies, it was essential to provide such training to improve the quality of data gathered and to minimise bias. Training sessions covered the following areas: ethical considerations, sampling frame, tracking questionnaires' administration, sampling, inclusion and exclusion criteria, recording distributed copies of the questionnaire, helping patients with special needs and illiterate patients to complete questionnaires, and questionnaire collection. The team's contribution to this study was extremely valuable. At the end of the fieldwork activities, the researcher handed a signed letter to both PHC managers and the research team expressing his appreciation for their cooperation and assistance.

5.7.7. Confidentiality and data protection

Saudi people are not acquainted with social science research to the same extent as people in Europe or the USA. Therefore, the researcher had to take steps to assure people of his genuine intentions in carrying out the research. He gave detailed information and full explanations to those wanting to know more about the nature of the study. He and his assistants made every effort to ensure the data collection process went smoothly. The researcher and all others involved in the research complied with University of Bristol ethical requirements, and assured all research participants that data elicited from them would be treated in the strictest confidence and any information gathered used for research purposes only. Interview schedules and distributed questionnaires had a front sheet explaining the importance of this research to Saudi Arabian society in general, and the military sector in particular. The letter also emphasised that participation was voluntary and informants would remain anonymous.

5.7.8. Fieldwork preparations and piloting

In June 2003, the researcher travelled from the UK to Saudi Arabia to conduct fieldwork for the patients' survey. The fieldwork was scheduled to last for three months until the end of September 2003 (see figure 5.3). Prior to the trip to Saudi Arabia, the researcher devised a detailed fieldwork activities schedule. Formal letters were arranged to gain access to the research sites and most of these communications were processed through the Saudi Embassy in London. The researcher also obtained formal letters from his supervisors to assist this process. The Department of Social Medicine supplied the researcher with the stationery (University of Bristol headed paper envelopes, files, etc.) used during fieldwork activities.

When the researcher arrived in Riyadh city, the Ministry of the Interior, the sponsor of the researcher's study in the UK, provided him with essential facilities to conduct the fieldwork activities (temporary office, personal computer, telephone line, access to the Internet, small photocopier, etc). Access to such facilities was extremely valuable for curtailing costs and facilitating organisation of all necessary activities. Contact was immediately established with the General Directorate of Health Care Affairs in both sectors (the Ministry of Health and the Ministry of the Interior). Formal endorsement letters were sent from each General Directorate to each primary health care manager of the twelve primary care centres involved in this study .At this point, the researcher visited each primary health care centre to arrange formal meetings with managers and their team to explain the grounds of the research and to organise a plan for questionnaire piloting to be followed later by full-scale questionnaire administration to patients.

The first month of the fieldwork was devoted to the pilot study particularly considering the following: data entry, analysis of data from the pilot study, final questionnaire modification, translation, and proof reading. The researcher maintained direct contact with his supervisors, to update them of the progress made and to comply with further suggestions regarding the final version of the

patients' survey questionnaire. By late July 2003, a pilot study of 24 patients had been completed and a final version of the questionnaire, both in Arabic and English, was duly checked and edited by an independent committee of Saudi bilingual university academics.

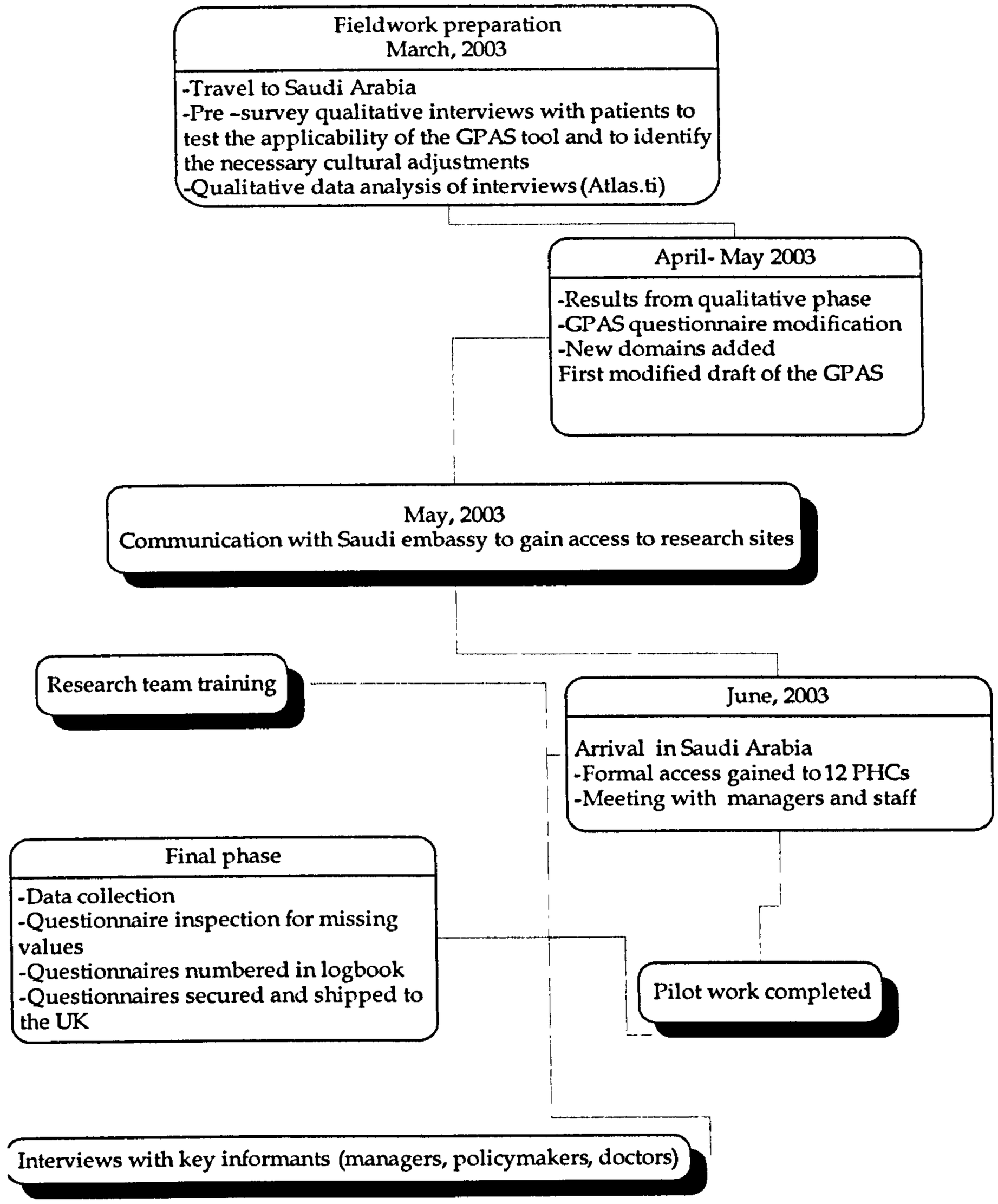
The translation was carefully conducted to ensure conceptual equivalence of the wording of the translated questionnaire. The researcher and the translation committee were aware of the pitfalls of word-to-word translation and adopted a strategy whereby the translation aimed to ensure the meaning was not lost during the translation from Arabic to English and vice versa. Arabic standard language was endorsed as the platform for translation. This was deemed important to avoid any colloquial speech or slang phrases which might offend or limit understanding of the questionnaire. Credit is due to Dr Badran Al-Omar[a] and colleagues whose contributions greatly enhanced the quality of the questionnaire's English/Arabic translation. Ultimately, a final version of the patients' survey questionnaire was produced, addressing recommendations elicited from patients during the pilot work and the translation committee.

As a single researcher in this study, it was not possible for the researcher to be present in all primary health care centres during questionnaire administration. Thus, the researcher provided each primary care manager and the associated team with his mobile phone number to contact him if any problem arose, or if there were any further questions.

---

a Dr Badran Al-Omar is an Assistant Professor at the Department of Public Administration, Administrative Sciences College, King Saud University, Riyadh, Kingdom of Saudi Arabia. Dr Al-Omar obtained his Doctorate from the University of Wales.

Figure 5.3: Fieldwork activities' timetable



5.7.9. Piloting

Prior to distributing the questionnaire, it had to be piloted to check its validity and reliability. The questionnaire was purposively distributed to 24 patients, comprising both genders, who were approached by the researcher. All patients were interviewed face-to-face by the researcher and asked to fill in the questionnaire while the researcher observed the procedure. This allowed the researcher to engage in a two-way feedback process between himself and

participants. Participants usefully contributed feedback that enabled the researcher to produce a final version of the questionnaire. Piloted questionnaires were processed and coded to prepare them for entry into the SPSS 11.5 programme. They were then checked for face and content validity and Cronbach's Alpha used to assess their reliability.[301] These are discussed below.

Reliability and validity tests

Reliability can be measured in many ways and often using methods such as *test-retest* or *internal consistency methods*. The test-retest method is expensive and time consuming because the same sample has to be re-tested within a very short period of time after the first sampling. Oppenheim (p. 160[277]) also raises concerns about using test-retest as a reliability measure because it may produce resistance, as well as a practice effect, which means the 'same' test is no longer being administered under the 'same' conditions. Oppenheim further suggests that to avoid these problems to use the internal consistency method, usually associated with Cronbach's Alpha coefficient. Published GPAS studies have used both test-retest and Cronbach's Alpha coefficient to yield reliability for GPAS scales (Ramsay et al.;[302] Bower et al.[282]). Published GPAS Cronbach's Alpha coefficients have been above (0.70), regarded as 'excellent internal consistency'.[302]

However, due to lack of time and resources, this study applied Cronbach's Alpha coefficient as the only method to assess the questionnaire's reliability. Reliability results were, to a large extent, in agreement with published GPAS results. The results indicate the Alpha value was generally high for both individual scales and for overall scale tests. Individual scale tests revealed the lowest Alpha value was for the communication scale (.6224) and the highest Alpha value was for the newly added psychological issues scale (.9687). Although there is no figure universally regarded as an acceptable value for internal consistency reliability, many commentators view an alpha value of (0.74) and above as an acceptable.[240] The overall Alpha value for all scales was

(.9411), an indicator that the questionnaire was reliable and internally consistent.

Content and face validity was confirmed as follows:

- Review of the literature: the study's questionnaire was an extended version of the GPAS. The GPAS was selected from amongst other questionnaires after an intensive search and review of the available literature. The GPAS has been examined by other researchers in the UK and proven to have a high level of internal validity (Ramsay et al.;[302] Bower et al.[282]).

- A second draft of the study's questionnaire was piloted on 24 patients. Participants' remarks were addressed and taken into account in producing the final copy. For example, participants indicated that instead of being asked to rank quality attributes from 1 to 14 it would be much easier to 'tick' rather than write numbers. The researcher responded to this suggestion and modified the question by introducing a 5-point Likert scale ranging from 1:'not important at all' to 5:'very important'.

- A third and final draft of the questionnaire was handed to three Saudi health care academics who had graduated previously from UK Universities and had good skills in both spoken and written Arabic and English. In what is known as a face validity check, the researcher asked them to check the Arabic translation, and the words and phrases used, etc. The researcher's supervisors also provided valuable comments for enhancing the questionnaire's effectiveness.

- The final version of the questionnaire was subsequently produced and implemented in the study.

5.7.10. Questionnaire development

In the literature there are a range of techniques that have been developed to specifically elicit patients' views on quality of services.[14,18,21,302,303] Lewis[19] and many other commentators, such as Fitzpatrick;[219,220] Cleary;[68,211] and Carr-Hill,[64] suggest that standardised instruments are more likely to be reliable, valid and, more importantly, the researcher can compare their data with published results. Hence, using a standardised instrument was a priority for this study, but several issues had to be considered before final selection of the instrument was made, namely: (1) the instrument had to be developed to elicit patients' views on quality at the PHC level; (2) the instrument had to have good psychometric properties (reliability and validity); (3) the instrument had to have been published in reputable academic journals; and (4) the researcher should be allowed to modify and use the tool free of charge.

From hundreds of questionnaires identified in the literature, only nine (see table 5.8) had potential relevance for this study and fulfilled the four criteria established for this research. They had been recently developed in the UK, Europe, and the USA, and were:

- National Survey of General Practice Patients
- General Practice Assessment Survey (GPAS)
- EUROPEP
- Doctors' Interpersonal Improving Practice Questionnaire (DISQ)
- Enablement
- Recertification patient survey
- Satisfaction with surgery and consultation
- Picker Patient Experience preferences (including primary care)
- Primary Care Assessment Survey (PCAS)

Table 5.8: Recent patients' views surveys.

Name	Description/ topic covered (domains)	Items and format	Sample	Reference
1-National Survey of General Practice Patients	Access, interpersonal relations, out-of-hours care, use of other health services, referrals		Designed as a postal survey. First mailing achieved a response rate of 64% from sample of 100.000 (n=61.426). Results available for each health authority in England. Now being repeated to produce data for each PCT. http://doh.gov.uk/nhspatients/	Airey C.S, Erens B. National Survey of NHS patients: general practice 1998. London: Department of Health, 2002.
2- General Practice Assessment Survey (GPAS)	Includes ten subscales: access, receptionists, continuity of care, communication, interpersonal care, doctor's knowledge of the patient, enablement, specialists' referral, nursing care, and overall satisfaction.	34-47 items, mix of report and evaluation items.	Designed as a postal and in surgery survey. Comparative data available. http://www.Gpas.co.uk.	Ramsay J., Campbell J.L., Schroter S. et al. The General Practice Assessment Survey (GPAS): tests of data quality and measurement properties. Fam Pract 2000; 17: 372-379.
3- EUROPEP	Short version includes 23 items for self - completion by patients. Available in 15 different languages.	23 items, evaluation format.	Comparative data available from many European countries. http://wwwequip.ch/groups/europep.html	Wensing M., Mainz J., Grol. EUROPEP: development and validation of a European standardised outcome instrument for patient evaluation of quality of care in general practice. (Conference proceedings.) EUROPEP Invitational Conference in Copenhagen, 2-4 October 1998.

4- Doctors' Interpersonal Improving Practice Questionnaire (DISQ)	Patient evaluation of doctor's interpersonal skills includes: access, technical care, continuity, co-ordination, and organisation of care, general satisfaction.	27 items, evaluation format, available in 14 languages.	Patient questionnaires on exit from consultations. Comparative data available	Greco M., Brownlea A., McGovern J., and Cavanagh M. Consumers as educators: implementation of patient feedback in general practice training. Health Commun 2000; **12**: 173-193.
5- Enablement	A six-item questionnaire to measure the degree to which patients feel 'enabled' by consultation	6 items, evaluation format.	Patient questionnaire on exit from consultations. Comparative data available.	Howie J.R.G., Heaney D., Maxwell M., Walker J.J. A comparison of a patient enablement instrument (PEI) against two established satisfaction scales as an outcome measure of primary care consultations. Fam Pract 1998; **15**: 165-171.
6-Recertification patient survey	A patient survey developed by the American Board of Internal Medicine for use in the US for recertification. The GMC is developing a similar instrument in the UK.	-	Thirty patients were asked to complete the survey. http://www.abim.org/cpd/cpdhome/index.html	Fidler H, Lockyer JM, Toews J, Violato C. Changing physicians' practices: the effect of individual feedback. Acead Med 1999; **74**: 702-714

Name	Description/ topic covered (domains)	Items and format	Sample	Reference
7- Satisfaction with surgery and consultation	Ask patients to indicate their extent of agreement/ disagreement with various statements about general practice.	17 or 26 items, evaluation items, available in English only.	Designed for self-completion after the consultation/ no information about comparative availability.	Baker R. Development of a questionnaire to assess patients' satisfaction with consultations in general practice. Br J Gen Pract 1990; **40**: 487-490.

8- Picker Patient Experience preferences (including primary care)	Includes eight dimensions: access; respect for patients' preference; coordination and integration of care; information, communication and education; physical comfort; emotional support; involvement of family and friends; transition and continuity.		Designed as a postal survey. Comparative data available from Europe and US. http://wwwpickereurope.org	Gerteis M, Edgman-Levitan S, Daley J, Delbanco TL. Through the patient's eyes: understanding and promoting patient-centred care. San Francisco: Jossey Bass, 1993.
9- Primary Care Assessment Survey (PCAS)	Domains: access technical care, interpersonal care, continuity, coordination, organisation of care	49 items, mix of report and evaluation items. Available in English and Spanish.	Available at http://www.musc.edu/dfm/RCMAR/PCAS.html	Safran DG, Kosinski M, Tarlov AR, Rogers WH, Taira DH, Lieberman N, Ware JE. The Primary Care Assessment Survey: tests of data quality and measurement performance Med Care. 1998; 36(5): 728-39

Source: from two journal articles: 1- Coulter and Elwyn[27] 2- Bower[222].

A subsequent review of the nine instruments in table 5.8 suggested only three were relevant for this study: the EUROPEP questionnaire, the Picker Patient Experience Preference questionnaire, and the General Practice Assessment Survey (GPAS). The Picker Patient Experience Preference questionnaire was developed by the Picker Institute, which is a non-profitable health research organisation. The researcher contacted the institute for more details about the questionnaire and copy of it. However, because the questionnaire had been developed for the NHS it was not possible for the institute to provide further information about it without prior consent and involvement of the NHS. The Picker questionnaire had therefore to be excluded because of difficulties obtaining necessary and important information. The EUROPEP, on the other hand, was developed by researchers in the Netherlands, and funded by the European Union. The EUROPEP is widely considered to have good psychometric properties.[303,304] It consists of 23 items, all in evaluation format. There has been some debate, however, about asking patients to 'evaluate' rather than to 'report' aspects of care[a].

The developers of the General Practice Assessment Survey (GPAS) addressed these concerns and designed a self-report questionnaire to ask patients to evaluate and report ten care attributes of quality. These attributes are: access, receptionists, continuity of care, communication, interpersonal care, doctor's knowledge of the patient, enablement, specialists' referral, nursing care, and

---

a In this regard, Bower comments: "Patient assessments of quality have traditionally been conceptualised as evaluation in nature, related to the social-psychological construct of attitude, i.e. a general evaluation or feeling of favourableness or unfavourableness toward the object in question. However, measurement of attitudes introduces a number of complex issues, such as the effects of social desirability response bias. Measurements of satisfaction have often been found to demonstrate high skew to the positive end of scales, which may relate to respondents' reluctance to criticise health professionals, concerns about the confidentiality of their responses, or not wanting to be perceived as complaining. To overcome these problems, some assessments have focussed on the report of specific aspects of care (e.g. waiting times, availability of services) rather than evaluation" (Bower, p. 552[222]).

overall satisfaction. The GPAS has two versions. The GPAS-1 was developed originally in the USA by the Boston Health Institute (known in America as the Primary Care Assessment Survey[305] (PCAS)) and in 1998 was adopted and modified by the National Primary Care Research and Development Centre in Manchester University to be sensitive to British needs. The initial version of the GPAS consisted of the following: Availability and Accessibility, including: availability of appointments, waiting times, physical access and telephone access; Technical competence, including: the doctor's knowledge and skills, and the effectiveness of his or her treatment; Communication skills, including: providing time, exploring patients' needs, listening, explaining, giving information and sharing decisions; Inter-personal attributes, including: humaneness, caring, supportiveness and trust; and Organisation of care, including: continuity of care, and, the range of services available. A newer version of this survey, the GPAS-2,[306] (53 items) was developed in 2003, and eliminates scales pertaining to technical competence, trust and coordination due to low Cronbach Alpha reliability scores compared to other scales.[302]

The GPAS has been intensively tested in primary care settings in the UK and results are readily available through publications. The researcher travelled to Manchester University/ National Primary Care Research and Development Centre, and attended a brief meeting with GPAS developers. The researcher was permitted to use their tool. It became evident that the GPAS was the most applicable tool for this study because it fulfilled the following criteria: it was developed to elicit patients' views on quality at primary care level; it has good psychometric properties (reliability and validity); it has been published in several reputable academic journals (i.e. *Family Practice,*[302] *The British Journal of General Practice,*[283] and, recently, *the Journal of Health Services Research and Policy*[307]); and the researcher was given permission by its developers to modify it and use it free of charge.

5.7.11. Data collection, processing and cleaning

Data collection of completed patients' survey questionnaires started from the first day of questionnaire administration. The researcher scheduled daily visits to different primary care centres. Instead of collecting questionnaires in one batch, to save time and effort, at the end of working hours the researcher met his team, discussed the day's activities, checked the number of questionnaires that had been distributed, and collected those which had been completed. Questionnaires were processed through two preliminary phases to check for incompleteness and inconsistencies. First, each questionnaire was marked with a letter and colour to identify the sector to which it was affiliated. MoH questionnaires were marked with a blue capital 'C' in English to indicate they belonged to the civilian sector, while questionnaires from MoI PHC centres were marked with a red capital 'M' in English to indicate they came from the military sector. Each questionnaire's front page had a section marked 'PHC ID.' and 'PATIENT ID.'. The researcher designed a logbook with 'patient id.' numbers from 1-948. Returned questionnaires were logged into this book and given a unique number representing respective PHC centres. Those numbered 1-6 represented military PHC centres and those numbered 7-12 represented MoH PHC centres.

The next phase involved thorough manual inspection of individual questionnaires for missing values. The study adopted the original GPAS strategy for excluding invalid questionnaires.[308] GPAS published work stipulates guidelines for excluding invalid questionnaires.[282,283,302] In general, for the fourteen scales in the questionnaire it must be possible to calculate half or more of the scales' items. For example, the 'access scale' has 8 assessment items, therefore at least 4 items must be completed to be valid for calculating scores. Missing values were coded '9'. Missing data occurs when respondents do not answer questions. For most of the GPAS variables, recoding was necessary for some items to derive the final values to use in the analysis. This process

comprised three tasks presented in the following box (quoted from the GPAS manual p.19[308]):

- Changing all out-of-range responses to missing values: Prior to assigning the final item value, all variables were checked to ensure they fell within the maximum and minimum coding values. Items lying outside the minimum and maximum values were recorded as missing values.

- Changing 'does not apply' and don't know' responses to missing values: For a number of assessment items, participants had the option to tick 'does not apply' or ' don't know' (Q 6b, 7a, 7b, 10, a, 10b, 16a-b, 19a-c). In order to calculate the scale values, these responses were recorded as missing.

- Recalibrating certain items for scaling purposes.

In total, thirteen of the collected questionnaires were not completed at all apart from the first page, and therefore were not included in the study dataset because they did not qualify for data analysis. In other instances, where respondents had missed or answered the same question twice (for example: ticked "very good" and "good"), these cases were treated according to the GPAS manual's instructions. The GPAS manual indicates that missing values should, in general, be coded '9'. In the event of respondents ticking more than one response, the GPAS manual recommends the following action should be taken:

- Where the two responses are not adjacent (e.g. a respondent ticks both 'good' and 'poor'), record the item as missing.

- Where two responses are adjacent (e.g. 'good' and 'very good'), code the item that gives the least favourable report.

Finally, questionnaires were grouped according to the primary care centre to which they belonged, packed in secure boxes and shipped back to the UK.

5.7.12. Data coding and entry

Completed questionnaires were duly coded and entered using the Statistical Package for Social Science Software (SPSS 11.5). However, for more sophisticated analysis, such as cluster analysis, all later analyses were carried out using Statistical Software for Professionals (STATA 8.2). Data entry for the study questionnaires was completed at the Department of Social Medicine, University of Bristol. Random samples of the questionnaires were checked by the researcher and no incorrect entry was reported. The entered dataset was saved and data analysis subsequently undertaken. The next section discusses data analysis.

5.7.13. Data analysis

Most quantitative research methods textbooks offer an almost unified constitution for describing and reporting survey research findings.[240,243,245,273,309] Nevertheless, different studies have different objectives and indeed different applications. Yet, regardless of the level of variation in the outline, structure, and analysis strategies between different research studies, they share the same boundaries of scientific research.

In an attempt to utilise the most rigorous analytical methods, the analysis plan and analytical approaches employed in this thesis share two different approaches derived from two different disciplines. First, they share characteristics of social science survey research since the present study is an exploratory, evaluative cross-sectional survey, in which participants are surveyed at a particular period of time and at a particular location. Second, applying and utilising a rigorous statistical method, (cluster analysis) this study shares characteristics of medical science research.

The underpinning rationale for using such a 'cross-discipline' approach lies in the fact that this study data, as described in the sampling section, is clustered. The level of sampling is at primary care centre level rather than patient level. This has to be accommodated in the research design, sampling to power the

study, and indeed in data analysis. Standardised statistical techniques, which are widely employed in social science research, are not applicable because they assume independency of individuals' views or perceptions whereas this is not always the case in clustered data.[287,289,292,310] For the last 15 years, new analytical approaches to account for clustering effects have evolved and are well documented in the medical research literature.[289,291-294,298,299,311-315] Cluster analysis has a long history in scientific research because both humans and animals tend to live in hierarchical structures and therefore are nested within groups or organisations (clusters[316]).However, few social science disciplines have accounted for the cluster effect in published research. Educational research as one example of the social science disciplines has, however, addressed cluster effects in recent publications.[317-319] On the other hand, very few studies in the field of patient satisfaction research have addressed the cluster effect in data analysis.[320-322]

Descriptive analysis

Although adjusted for clustering chi square tests for binary outcome and adjusted t-test for continuous outcome are available for researchers,[289,323,324] these tests are unreliable in the case of this study because they require a high number of clusters (at least 20). Donner and Klar indicate that with fewer than 10 clusters (PHCs) within each arm of a study (sectors), most statistical methods (adjusted for clustering effects) will be unreliable for binary outcomes (see Donner and Klar, p.100[289]). They say the same about continuous outcomes in their article "Statistical considerations in the design and analysis of community intervention trials".[324] This is because between-cluster variation is very difficult to estimate when there are so few clusters for there to be variation between. The authors advise restricting the analysis to simple comparisons between the study arms (sectors). Thus, for simplicity and due to the nature of the descriptive analysis and the small number of clusters available, standardised statistical tests, such as Chi Square, are used in this section.

GPAS scales' calculation

The GPAS calculates quality attributes' scales by a formula that aggregates the score of the mean of each scale. Without exception, scales' scores range from zero (the lowest possible score) to 100 (the highest possible score). Consequently, each scale can be presented as a percentage of the maximum possible score, for example, 80%, 90%, etc.[20] (see Appendix D for an example of how the GPAS scales are calculated) Thus, mean calculation and utilisation of parametric statistical tests (t test, one-way analysis of variance (ANOVA)) are theoretically possible because metric data is likely to be normally distributed.[325] However, most standardised statistical tests assume that each individual is independent but this is not the case in sampling based on clusters of groups such as PHC centres, where individuals are affected in a similar way by the intervention or, in the case of this study, quality of services. Hence, assumptions for conducting standardised statistical tests are violated and are therefore not applicable with clustered data, unless the design effect is considered.[289,299,324]

Theoretically, there are a number of analytical approaches available to account for clustering effects in the data. Most common approaches, as identified by Kirkwood and Sterne,[292] are: 1- Summary measures; 2- robust standard errors; 3- random effects (multilevel models[285,318,319,326-330]); and 4- Generalised Estimating Equations (GEEs). Many researchers have observed the difficulties that other researchers face when deciding which analytical approach best fits their purposes by answering their objectives. In this regard, Flynn commented:

> *"Investigators typically face an array of possible methods of analysis of clustered data. Although it is rarely the case that one method is known to be, in terms of theoretical properties, uniformly superior to all others, investigators are being made increasingly aware of the relative merits of the alternative on offer. In particular, they have been warned about which methods are known to be inappropriate. Nevertheless, there is often a degree of judgment required in choosing the most appropriate method of analysis" (Flynn, p.51[297]).*

Thus, as with most analytical approaches, each method identified by Kirkwood and Sterne has its advantages and disadvantages. As noted by Donner and Klar,[289,324] most community based interventions commonly have few clusters, consequently, due to the small cluster numbers included in this study (12 PHC centres), methods like robust standard error are inappropriate because they require a high number of clusters (more than 30).[324] Lack of sufficient cluster numbers may result in an imprecise estimate of the variation between primary health centres.[289] The summary measures approach (similar to the analysis of repeated measurements on the same subject[287]) is one method which does not require a large number of clusters but it suffers from two main problems. First, it treats all clusters (PHC centres in this case) as equal in size, thus a cluster with one observation will be treated similar to a cluster with one hundred observations.

The other weakness of this approach is that researchers are increasingly advised of the attached ecological fallacy such an approach may lead to, because it examines relationships at cluster level rather than individual level.[287] Despite this, this approach is technically simple and allows for capturing the outcome of interest for each cluster individually and then applying standardised tests.

Inferential analysis

The summary measures approach does not, however, support complex analysis such as adjusting for confounding. According to Goldstein,[319] two other approaches to confront this are multilevel models (random effects models) and marginal models such as the GEEs. Like robust standard errors, random effects and GEE approaches also require more clusters than available for this study. GEEs are a relatively new approach and known to produce very accurate estimates, even with skewed data.[289,319,326]

In addition, GEEs have the ability to construct an exchangeable correlation matrix between respondents from each primary care centre but not necessarily

between respondents from other primary care centres, which is necessary in this study situation where a multilevel model is needed because the study objective is assessing patients' views per sector not per PHC centre.

Ukoumunne examined both GEEs and random effects models and concluded:

> *"Random effects models are more useful when the evaluator wants to distinguish the effects of the organisational or geographical context from the composition of the sample of individuals within the organisation or area. This type of distinction is often important in observational evaluations of existing health services, for example, in comparing the performance of different institutions, or comparing healthcare processes and outcomes in different geographical areas" (Ukoumunne, p. 46 [295]).*

Thus, the random effects approach was deemed more appropriate for this study in terms of conducting more complex analysis. Tabulations and frequencies are utilised for descriptive analysis.

5.8. PHASE 3: QUALITATIVE INTERVIEWS WITH PHC DOCTORS, HEALTH SERVICE MANAGERS AND SENIOR POLICYMAKERS

Qualitative research has been utilised in many different ways in health care research. Qualitative methods have been used to either complement quantitative research or independently in their own right.[208,252] In this study, the qualitative method is utilised in two different contexts serving two different research purposes. In the first stage, the qualitative method (interviews with patients) is employed to serve as a preliminary investigative approach prior to the subsequent quantitative research. In the second stage qualitative research is not directly linked to quantitative research but plays a specific role in piecing the picture together. The third objective of this study is to explore the views of doctors working in PHC, health service managers, and senior policymakers on the quality of PHC, and to compare them with patients' views. Unlike

quantitative methods, qualitative methods are powerful in yielding in-depth information about people's lives and experiences. Issues such as behaviour, emotion, feelings, social processes, cultural phenomena, and organisational functions are best explored using qualitative research.[271] Pope and Mays confirm this, stating "this type of "stand-alone" qualitative research is increasingly being used in studies of health service organisations and policy. It has been used to considerable effect in evaluating organisational reform and changes to health service provision from the viewpoint of patients, health professionals, and managers"(Pope and Mays, p. 6[208]). Hence, qualitative interviews with health care key informants were deemed the most appropriate method to achieve the study's third and fourth objectives.

5.8.1. Selection of health care informants

Informants in the study were purposively selected to ensure full understanding of the area under investigation. This technique aims to increase the diversity of samples in terms of socioeconomic background and to enable the researcher to search for different properties. Purposive sampling is useful in this study because it allows the researcher to deliberately target people who hold more knowledge about the topic of the research. A list of potential interviewees was drawn up (17 candidates), later reduced to include 10 key informants whose views it was believed would enrich the study (i.e. authoritative policymakers from both MoI and MoH sectors, managers, doctors, and different levels of seniority). Another factor included in the researcher's final choice of study informants included their willingness to allow interviews to be tape-recorded.

5.8.2. Characteristics of informants

In total, ten informants participated in this part of the study's empirical research. Table 5.9 shows six of the study informants were from the MoI sector (PM4, M5, M8, D6, D9 and D10), three were from the MoH sector (PM1, PM2, M7) and one was a senior informant (PM3) from the Executive Board of the Health Ministers'

Council of the Gulf States' Council. Policymaker informants are designated as 'PM', PHC service managers as 'M', and doctors as 'D'. As can be seen from table 5.9, all informants were male and all informants, except PM4, were Doctors of Medicine (MD). PM4 also held a PhD degree from a UK University. Eight informants who participated in this study were civilians and two (PM4 and M5) were military officers. The following table details informants' sociodemographic characteristics.

Table 5.9: Informants' sociodemographic characteristics

No	Code*	Location	Gender	Position	Educational level
1	PM1	Ministry of Health	Male	Deputy General Manager of the Primary Health Care Division in the Ministry of Health	Family Medicine Consultant, Saudi Board of Primary Health Care Medicine
2	PM2	Ministry of Health	Male	Quality Assurance Executive Manager	Consultant, Saudi Board of Family Medicine, King Faisal University.
3	PM3	The Executive Board of the Health Ministers' Council of GCC States	Male	Executive Director of the Health Ministers' Council for the GCC States	MD, Fellowship Royal College of Physicians, United Kingdom
4	PM4	Ministry of the Interior General Directorate for Health Care Services	Male	Medical and Human Resources Director (Military Brigadier/ Policymaker).	PhD, Health Care Management, University of Wales Swansea, UK
5	M5	Ministry of the Interior/ Security Forces Primary Care Centre	Male	Primary Health Care Centre Manager	MD, Saudi Board of Primary Health Care.
6	D6	Ministry of the Interior Military Training City	Male	PHC doctor	Internal Medicine Specialist
7	M7	Ministry of Health- Al Rabuah Primary Health Care Centre	Male	PHC Doctor (former PHC manager)	Family Medicine Specialist
8	M8	Ministry of the Interior Military Training City	Male	PHC services manager	MD, MSc. University of Wales, UK
9	D9	Security Forces' Primary Health Care Centre	Male	PHC Doctor	MD, Arab Board of Family Medicine
10	D10	Security Forces' Primary Health Care Centre	Male	PHC Doctor	MD, Saudi Board of Primary Health Care Medicine

*Policymaker (PM), services manager (M) and doctor (D)

5.8.3. Data collection

In order to complete this phase, the researcher travelled from the UK to Saudi Arabia between May and September 2003 to undertake qualitative fieldwork which involved face-to-face semi-structured interviews with health care informants. With one exception, interviews took place in Ministry of the Interior and Ministry of Health facilities in Riyadh city. Interviews were guided by the interview schedule (see appendix E) designed by the researcher to ensure informants covered all topics necessary to achieve the study aims and objectives. This gradually led respondents from general issues related to health care professionals' relationship with patients, to issues concerning patients' views, and how health care professionals react to them. Asking open-ended questions and moving from general to specific issues was a helpful technique for eliciting health care informants' views and obtaining important information. The researcher commenced all interviews by re-emphasising the issues of confidentiality, data protection, and freedom of participation. This helped to establish early rapport between the researcher and participants. The researcher also handed a signed letter on University of Bristol headed paper to each participant assuring him that his identity and any data elicited in the course of interviews would remain confidential.

5.8.4. Data analysis

To undertake a thorough analysis of the data, the constant comparison technique using Atlas.ti software was employed to analyse data obtained from health care informants' interviews. A full account of qualitative data analysis procedures has been presented in section 5.6.4 in this chapter.

5.9. SUMMARY OF THE STUDY OBJECTIVES, DESIGN AND METHODS

Objective one:

> *"To assess patients' views on the quality of primary care"*

Objective one is addressed using mixed methods: qualitative and quantitative. The preliminary qualitative phase took the form of semi-structured interviews with patients, aimed to inform the development of the patient-centred quantitative survey instrument. The second phase involved administering a self-completion survey questionnaire to a sample of consecutive patients.

Objective two:

> *"To compare the quality of PHC provided by the Ministry of the Interior and the Ministry of Health, as perceived by patients"*

The study questionnaire survey is administered to two different populations: (i) Ministry of Health (MoH) primary care patients and (ii) Ministry of the Interior (MoI) primary care patients. The objective is achieved through conducting a comparative analysis of data from the two sectors.

Objective three

> *"To explore the views of doctors working in PHC, health service managers, and senior policymakers about the quality of PHC, and compare them with patients' views"*

This objective is achieved by conducting semi-structured interviews with purposefully selected PHC managers, PHC doctors and senior policymakers. Interview findings are compared with qualitative data obtained from interviews conducted with patients to accomplish objective one.

Objective four

> *"To explore the extent to which doctors working in PHC, health services managers, and senior policymakers take views about quality into account when making decisions about PHC services"*

To achieve this objective, data obtained from the aforementioned interviews with patients, doctors, managers and senior policymakers is analysed as well as data from the questionnaire survey administered to patients who consecutively attending 12 MoI and MoH primary care centres.

5.10. SUMMARY

This chapter has presented an account of this study's methods, design, and rationale for utilising a sequential mixed-method approach. It has also presented a detailed account of how the empirical work is carried out, including a description of the research's three main phases: preliminary qualitative phase, survey developments and administration, and qualitative interviews with health care informants. The next chapter embarks on the analysis of data derived from interviews with patients as informants.

CHAPTER 6. PATIENTS' VIEWS ON QUALITY: QUALITATIVE DATA

6.1. INTRODUCTION

This chapter presents the findings from semi-structured interviews conducted with patients. Because this is an exploratory study, the aim is to elicit and reflect what quality means to patients in general as well as what is important to them regarding specific quality aspects, particularly the ten themes identified by the GPAS. The interview schedule (see appendix A) was designed to start with spontaneous discussion leading to more direct questions to fulfil two distinct functions. First, in order to inform development of the main study instrument for surveying patients, semi-structured interviews were conducted to elicit patients' views and reflections on GPAS themes and extra themes identified as important to them in terms of quality of care.

Second, because the study's third objective is "to explore the views of doctors working in PHC, health service managers, and senior policy makers on the quality of PHC, and compare them with patients' views", to address this objective from the patients' side, an in-depth exploration of patients' views on PHC services' quality was necessary.

The first section of this chapter primarily examines the notion of PHC as perceived by lay patients. It also looks at patients' expectation of PHC services and what they perceive primary care services should offer and not offer. This section therefore reflects the concepts and definitions of PHC discussed in chapter two. The second section presents patients' perceptions of the concept and definition of quality and how they define and view the importance of quality in the health care system and its provision of care. This section therefore reflects

concepts, definitions, and attitudes to quality in health care introduced in the literature reviewed in chapter three.

In the last section, an analytical account of patients' views on the quality of services provided to them by MoI PHC centres is presented. Patients' evaluation and judgement of quality is also discussed. This section refers to issues reviewed in the literature in chapter four relating to quality of health care provision.

6.2. FINDINGS

6.2.1. Section one: Primary health care

Patient understanding of the PHC role and concept

> *P6: "the patient should know what the clinic is offering and know exactly what its roles are."*

To some extent, all informants understood the concept of PHC and its specific role in the larger health care system. However, the level of understanding of what a PHC centre means varied. While some informants expressed a view of primary care similar to that of a professional, others seemed to define it negatively, by comparing its role with other levels of services, namely, hospitals. While some informants showed an understanding of the meaning and role of primary care services (P1), other informants (P3) referred to PHC centres as providing transitory or less important services compared to services offered by hospitals:

> *P1: "Undoubtedly, PHC centres play a large role, and are considered the first level of care the patient starts with."*

> *P3: "I go to the PHC centre for colds, and vaccinations or pregnancy follow-ups but for more serious diseases, I go to the hospital."*

Informant P1 viewed the PHC centre's role as significant since he referred to its 'large role'. He also commented that PHC is the first point of contact for patients to access the health care system. Other informants also identified this issue and

added more information about the nature of primary care and its preventive function. P8 said:

> *"Since it is the doorway to health services, it provides routine or preventive check up services.....I think it plays a very important role as a start to treatment and it is easy for the person with diabetes or high/low blood pressure to access. Moreover, it is better for these patients to be seen at primary care centres than hospitals."*

This informant interestingly referred to the easier access to primary care centres than to hospitals, at least for those with chronic illness seeking preventive care. He also pointed out that primary care centres provide 'preventive check up services' and it is more convenient for patients with longstanding illnesses to be seen at them than hospitals, because of their easier access.

However, informants also viewed primary care as only 'a start to treatment', suggesting that hospitals still played a dominant role in patients' perceptions when considering illness and the provision of treatment. This perception was held by informant P1 who commented:

> *P1: "since it is named primary health care, it is for minor transitory ailments that do not require hospital follow ups."*

However, the importance of PHC and its relationship with a higher level of care provision was clearly perceived by informant P5. He stated:

> *"I find that it takes on so many burdens from the hospital."*

This informant also referred to primary care as sufficient in its own right and indicated that its existence is crucial for hospitals because it helps to reduce the numbers of patients going to hospitals. P5 further remarked:

> *"If each person with a cold went to the hospital there would be significant overcrowding. I think the current system works well, and is adequately fulfilling its role."*

As mentioned in the previous discussion, with a few exceptions, the preventive aspect of primary care was generally not mentioned explicitly by informants. The view of PHC as a transitional stage and a minor health care facility compared to

hospital services was a perception held by most informants when asked what primary care meant to them.

Patients' awareness of appropriate use of services

Informants offered their perceptions of what the services are for and highlighted a number of areas where they felt that lack of awareness could affect both the service provider and the patient. Table 6.1 shows four categories not only important to patients but also to providers, who should find ways to raise awareness of their importance.

Table 6.1: Patients' appropriate/ non-appropriate behaviour

Category		Opinion
Misuse of the service		P1: "undoubtedly because this service is offered free, some people are really sick and others pretend to be sick."
Awareness of other patients needs		P1: "I want to feel I am not the only patient in the centre. Any patient wants to feel that others have confidence in the service provided when he is visiting the doctor. He wants to meet others who need to see the doctor more badly than he does."
Patients' compliance		P6: " when the doctor says your condition needs to be followed up after six months, this is better, so that the patient doesn't come back again after a week and increases the number waiting to see the doctor."
Mistaken behaviour	Seeking unprescribed medications	P6: "if someone knows the pharmacist will give him medication without him visiting the doctor, and I know people who don't see the doctor at all but go directly to the pharmacy, and the pharmacist gives him the medication without a prescription, this is mistaken behaviour on the part of the patient and the pharmacist."
	Vandalism	P6: "Patients themselves act wrongly. For example, when I was sitting in the female waiting area I saw some patients writing on the walls. I personally saw this with my own eyes and considered such behaviour an uncivilised attitude."

Summary of section one

Most informants perceived PHC as important and convenient, and an essential part of the health care system. However, there was little evidence that the WHO-view of PHC as provision of basic creative and preventive care was fully understood. The dominance of the hospital style of care influenced some

informants' perception of the primary care concept. Nevertheless, the data revealed that a few informants were aware of the difference between hospital and PHC services' provision. These informants pointed to health services managers' and other professionals' responsibilities as being to identify and highlight differences in the functions of hospital and PHC to patients. Informants' responses also indicated that awareness of the primary care role is not only crucial for the successful delivery of primary care but also important for patients' quality of life. If patients are fully aware and convinced of the important role of primary care, they will comply with doctors' instructions, not abuse service resources, nor seek unprofessional medical advice, including unprescribed medications. The next section will examine informants' views on quality in health care and its definitions.

6.3. SECTION TWO: QUALITY IN HEALTH CARE

Grouping major codes emerging from informants' accounts indicated six major themes spontaneously viewed by informants as important issues regarding quality of care: what constitutes quality, its definition; minimum level of quality for patients (i.e. the bottom line); quality of available PHC facilities; quality of technical care; quality and how it was shaped by increasing demand of care; and how quality can be improved.

Quality definition

> *P1 commented "You cannot separate quality into its components; it is a whole and not parts."*

The notion of quality differed among informants. Some informants defined quality as a whole package, which cannot be viewed as made up of separate components. Other informants defined quality as a satisfactory outcome, regardless of how the service is rendered. As can be seen from table 6.2, informants who held the first view believed quality should be assessed throughout the care process, in other words, from the start of the patient's access

to the service until the end of his/her visit. Informants who took this approach viewed quality as a whole experience for the patient and considered it also needed to be delivered as a whole package by providers. In other words, quality only exists for this group of informants if all members of the health care team work together to produce a quality service and harmonious organisation (see table 6.2). On the other hand, some informants defined quality in relation to specific criteria, such as P3 who referred to structural quality. She also defined quality in terms of the academic qualifications of health care providers. P1 and P4 linked quality to the outcome of treatment, and stated that without full recovery from their symptoms they considered they had not received a quality service. P6 slightly departed from their view and defined quality in relation to the resources and capability available at the centre. P5 also presented a different view since he pointed to criteria that each patient uses to define quality. He suggested each patient has a target when s/he goes to a health care facility, but should be realistic when setting the target.

Table 6.2:Informant' different views on the definition of quality

Quality definition	
Quality is one package P1, P3, P7, and P9	P9 said: "when you say the word quality, the first thing that comes to my mind is people working together to create something good. If all people work together as they are supposed to, this will increase their productivity and the overall result of the process will be a quality service. But if you find a devoted doctor and receptionists who are not as good and who treat patients badly, this will reflect on patients' evaluation of the doctor because of the bad impression given by the receptionists. But if you have from the beginning of the process a fixed appointment, receptionists' management of the place is good, you have tests taken at the lab or x-rays, nurses and doctors treat you kindly and with consideration, and, finally, you go to collect your medicine, if you go through all this process and find you are pleased at the end, this is quality and this is what should happen." P1: "complete quality is internal organisation in terms of reception, availability of patients' files in an organised way, visiting a suitable, efficient specialist doctor, and receiving suitable medication. You cannot separate quality into parts, it is a whole experience. " P7: "Health care should be integrated, the patient should experience the convenience of a good doctor and good medical devices....If there were no organisation, it would be difficult to find quality." P3: "In my view, when the care provided is integrated between the nursing, doctor and lab employees, if everyone perform his role the best way he can, then quality can exist."
Quality is about structure	P3:"From the building point of view, it should be structurally sound and all the necessary facilities available, like instruments and equipment. From the medical staff point of view, I mean the nurses and doctors, cleanliness is important because when the patient walks into the health centre and sees it neat, tidy, well organised and orderly, and cleanliness is emphasised, all these will make the patient trust the centre and want to visit it."
Quality is about the academic qualifications of health care providers (process)	P3: "If the medical staff are appropriately qualified from the scientific and academic point of view, we can say that the health centre has quality, but if they lack the necessary scientific and social preparation, this will mean the clinic will lack quality."

Quality is about the outcome of treatment	P1: "A patient sees quality in an organisation, an organisation includes the ease of approaching the doctor, the ease of receiving medication, the speed of the disappearance of symptoms. I can reach the doctor in seconds and I can get my medication prescribed in seconds but if a disease persists for weeks, this is not quality treatment." P4: "I assess quality by results not by the decoration or the building and its appearance, or the furniture and the health care methods. Of course, I appreciate these and the sterilisation of instruments is also very important and essential. But for me the healthiness of the person when he is discharged is most important and, in my view, is how quality should be measured."
Quality is about resources	P6: "I think quality depends on the present capabilities."
Quality is about satisfaction	P2: "The poorest quality is being dissatisfied while receiving the service, so what is good quality? It's being happy from the time I walk in until the time I walk out."
Quality is about targets and expectations	P5: "When I go to the clinic, I determine the objective of the visit, i.e. I am going because I want reassurance or I want to receive medication. If I go to the doctor to receive medication is the objective fulfilled or not? Is the objective fulfilled in a manner that I find acceptable? Quality depends on the availability of the doctor and medication and cleanliness; these are the axioms."

Minimum level of quality for patients

In their discussion about quality, two informants referred to what they considered the minimum level of quality. There was no one answer that appeared to cover all informants' views, but, generally, being satisfied with the service, and the availability of medication were considered minimum requirements by most informants. For instance, P1 indicated that for him being able to sort out his health concerns at the primary care centre without being referred to the hospital was a minimum level of quality. He commented:

> *"Anything satisfies me if I don't have to go to the hospital."*

P2 was more specific about his minimum level of quality requirement. He said:

> *"The most important thing to me is meeting the doctor and him giving me 100% of his complete attention. This, of course, should extend to all patients, regardless of their social position."*

Thus, P2 felt that meeting the doctor and spending sufficient time with him were minimum requirements, but he also suggested that different patients might receive different levels of treatment during the doctor/patient encounter. He stressed that all patients, regardless of their social position, should receive a similar level of treatment. P9 referred to two factors which identified quality for her. She said:

> *P9: "Actually there are two things with the same level of importance to me. First is to reach the doctor... [ ] The second is the expertise of the doctor, because if I am able to get an appointment but the doctor is not very good, this is useless. I care about seeing a good expert doctor, who can understand my illness and prescribe a medicine to help me recover. What is the benefit of having access to a doctor who does not understand your problem? I am willing to wait to see a doctor who can solve my problems."*

Evaluation of the quality of available primary care facilities

Most informants made no mention of the quality of primary care facilities, apart from P1 who referred to them directly. He compared hospital facilities, for example, laboratory, x-ray and other technical equipment usually utilised in visits to these health care institutions, with those he saw utilised in a primary

care centre. He thought primary care technical facilities not as sophisticated as those in hospitals but, nevertheless, considered them satisfactory. He said:

> *"There are no sophisticated machines like the ones in hospitals but they are satisfactory."*

P3 expressed a different view, considering technical facilities in primary care centres not as of good quality as those in hospitals and also referred to the inaccuracy of lab results. She commented:

> *"Well, from my visits to the centre, I feel the way they treat patients is very bad, even in the lab. Usually lab results are incomplete so they have to refer the patient to the hospital due to the deficiency in tests. Also, not everything is available so the results are not accurate. I once had a test in the clinic and the same one in the hospital and the results were totally different."*

Evaluation of the quality of technical care

When asked to evaluate the quality of technical care, P1 commented:

> *"I cannot judge the accuracy part but the doctor can. I mean the accuracy of tests, but the speed of performance is very good."*

Informants appeared to be very cautious in their assessment of the quality of technical care. Although the majority agreed they lacked the ability to judge the technical care provided by health care professionals, they nevertheless had a method to assess whether care was delivered at a good level of technical standards as indicated by P1, who stated:

> *"I cannot evaluate the doctor from his prescription but the one who can evaluate the doctor is another doctor."*

His comment suggests that a patient can go to another doctor to check the accuracy of the prescribed medication. P1 referred to another method to identify the quality of technical care, namely, speedy recovery from illness as an indicator of good technical care and prolonged illness as an indicator of poor technical care. He said:

> *"The expertise of the doctor is shown by how fast my symptoms disappear, if the disappear quickly I know the doctor has diagnosed my condition correctly and given me suitable medication. This is how the*

patient judges the doctor."

P5 and P7 held a very similar view to P1 on this issue but referred to a further way to judge technical care. In their view, if the doctor is honest and gives patients sufficient time, these factors will make them feel the outcome will be good and the quality of technical care is also good. P5 stated:

> *"I'm not a doctor, therefore, I don't know whether the doctor's doing the correct or incorrect thing but when you see the doctor and he honestly examines you and gives you enough time, you feel comfortable. These are the basic things but the results are in God's hands."*

P8 contributed another factor which he felt gave patients confidence in the technical capability of medical professionals. Professionals' academic training and qualifications reassure patients that the right person is doing the right job. He said:

> *"Workers, such as lab technicians or nurses, must be appropriately qualified in the type of work they undertake. This is essential for those working in the health services sector and dealing with matters of life or death."*

Quality and increasing demands for care

The growing number of patients visiting PHCs was a real concern to most informants. They felt this issue was threatening not only the level of service quality but was also having a direct impact on their satisfaction level. P1 commented as follows:

> *"Undoubtedly, the increase in the number of patients will affect the service. Initially, when we used to visit the doctor we had to wait 5 minutes only, but now we have to wait an hour and a half. This problem could be solved by an increase in the number of personnel in the medical team."*

P1 suggested that increasing the number of medical staff could help to resolve this issue but he also stated that patients eligible for treatment in these facilities should be restricted to military personnel and their close dependants only. He remarked:

> *"The increasing number of new recruits and visitors able to access these*

services affects the quality of provision."

P3 expressed her concern about the consequences of the increase in patients' numbers. She felt that such an increase exacerbated favouritism or nepotism which, she argued, spoilt the system. In other words, patients sought the help of friends or relatives who worked at health care centres to help them jump the queue which was an abuse of the system. She said:

> *"If there are too many patients, of course there will be manipulation and disorder in the process. But if the number of patients is small, the process will be normal and streamlined. People should not be able to take advantage of their connections and jump the queue ahead of others. If the patient is a relative of the doctor or a relative of one of the employees then s (he) should have to wait to see the doctor like other patients."*

P6 shared her views and suggested that a patient's medical condition should determine which patient could see the doctor before other patients. She remarked:

> *"Discrimination between people, for example, important people seeing the doctor before the rest, is not quality. The patient's medical condition only should determine whether someone sees the doctor before me although s (he) may be booked in after me. I am happy with this because I consider people's circumstances."*

P1 indicated that high-ranking patients may receive certain privileges over other patients, especially with regard to routine check-ups in the lab. He said:

> *"If the visit is only for a check up and not treatment, possibly since I'm a major, I get priority, no waiting for my check up. I directly enter the lab, receive a check-up, and the results there and then."*

P9 also suggested that the increase in the number of patients and lack of a well-organised appointment system affected the patient-doctor relationship and might also affect the accuracy of diagnosis. She said:

> *"If the doctor had a defined number of patients to see every day as a result of an appointment system, then the doctor would know his patients better and establish a relationship with them which would improve his ability to diagnose illness."*

P4 thought professionals' proficiency and devotion to duty would on their own solve the problem of overcrowding and increased patient numbers. He stated:

> *"If the workers were more professional in their dealings with patients. I'm sure that the problem of overcrowding would be lessened, patients' complaints about the long wait for appointments would be reduced, and operational procedures would become more efficient and effective."*

Quality improvement

Most informants suggested several ways to improve the quality of PHC services. Some informants provided specific examples of how current services could be improved. Most suggestions centred on particular aspects, such as an increase in specialist clinics, the establishment of an effective appointment system, ending nepotism (where some health care staff show preferential treatment to their friends or high-ranking patients), and providing educational and informative materials for patients sitting in the waiting area. P2 suggested the following with which other informants also agreed:

> *"The first thing to improve quality is to supply the needed specialisation in enough numbers, not only one or two doctors. The second is appointments should be organised. The third, you should help the patient make beneficial use of his/her time in the waiting room by supplying educational materials. The centre should expend efforts in wining patients' trust and making them feel their time at the health centre is not a waste of time. There should be no preferential treatment and everyone should adhere to the system's rules, starting from the time the patient meets the doctor till the time he walks out of the centre. Medical personnel should always speak the truth and be honest when dealing with patients. "*

P3 presented her own personal view of possible ways to improve quality. She felt that professionals' nationality, nurses in particular, could play a role in improving quality. Her view slightly differed from that of other informants, but she shared their views about waiting areas and receptionists' care. She also suggested that physical structure and medical storage were other aspects that should be looked at when considering quality improvement. She commented:

> *"Of course, there are many criteria that should be considered when seeking to improve quality. From the nursing staff point of view, I*

would hire nurses from nationalities known to be well educated and improve the layout and appearance of the reception and waiting room areas. The building itself, the storage of medication, the level of cleanliness, are among the many other criteria that should be borne in mind for quality to exist."

Summary of section two

It is clear from this section that informants perceived quality in different ways. A unified pattern did not appear in their answers relating to quality and its definition. Most informants supported the view that outcome is a sign of quality but does not fully describe quality of care. However, definitions of quality varied among informants. Whereas some viewed quality as a whole package, whose components cannot be looked at separately, others regarded quality as the production or outcome of care, particularly an improvement in symptoms or a speedy recovery. Other informants felt that the doctor's experience and qualification would assure quality. Noticeably, there were instances where informants pointed to a set of objectives prior to their visit and they assessed quality according to the fulfilment of these predetermined objectives, for example, visiting the primary care centre with the aim of obtaining a particular medication. With regard to evaluating quality of care, informants referred to various methods used to evaluate both technical care and available facilities. Most informants felt inadequate in their ability to evaluate the doctor's technical care capability, yet did so by using various methods, such as consulting another doctor.

6.4. SECTION THREE: PATIENTS' VIEWS ON QUALITY ATTRIBUTES

> *P2 commented: "the improvement of services starts by listening to the opinions of others."*

The previous two sections have presented informants' views on general issues relating to primary care and quality of care in general. This section aims to highlight important issues related to the quality of services patients received from a particular primary care centre. This section therefore moves from focusing on informants' views on general issues to more specific aspects of care, particularly the GPAS ten quality of care themes. This section is important for two reasons: first, it identifies which aspects of the GPAS instrument are viewed by informants as meaningful, and, second, which other aspects of quality they consider important but are not included in the GPAS survey instrument.

Satisfaction with access to care

> *P2 stated: "Of course I didn't introduce myself to him or let him know anything about my rank because if I had done so, things would have been different."*

Generally, access to PHC sites was viewed as an important aspect of care. However, access, particularly those belonging to the MoI, did not pose a problem to informants, as long as they were military personnel or affiliated to a MoI employee. Despite P2 admitting that knowledge of his rank might influence health care staff's attitude towards him, i.e. give him preferential treatment, P1 believed that, in general, most patients were able to access the services relatively easily. He said:

> *"There are no obstacles to the patient seeing the doctor at all. All the patient has to do is to come to the centre, submit his card, then see the doctor. The system in the Special Security Forces gives right of access to the patient, whether he belongs to the Special Security Forces or to the Ministry of the Interior, to treatment in this clinic."*

Views on waiting time (access issue)

Despite informants being able to access the service, this did not mean obstacles might not occur during the process. One major issue related to access to primary care services was the increasing demand for access, which resulted in ever growing patient numbers. P9 commented:

> *"Every time I want to visit the health centre, the first thing that I think about is the waiting time which makes me feel even more ill, since I sometimes have to wait two to three hours to see the doctor."*

Other informants also linked their concerns about the access issue with waiting times. Informants generally accepted they would have to wait to see a doctor, but most were concerned about the increasing level of nepotism which resulted in even longer waiting times. P6 said:

> *"Generally, waiting is accepted and is natural, but there is unfairness in the entry process if, because the doctor is my friend or my acquaintance, I am able to enter his room before anybody else. This is not related to quality at all and is not fair in the first place."*

Continuity of care

Informants agreed on the importance of continuity of care. However, each informant had his own view as to why continuity of care was important for him/her. Views could be divided into four groups. The first group felt that continuity of care with one doctor was important without giving a specific reason for this. The second group thought continuity of care important if certain conditions existed, for instance, the doctor was of a certain gender, or known for his/her knowledge and expertise. The third group felt that continuity of care was important for certain patients, particularly those with long-standing illnesses, for instance, diabetic patients. The last group took a different approach, suggesting that continuity of care was important but it was not a problem for a patient to have an ongoing relationship with another doctor too. Those in the first group are represented by the comments of P2 and P10. P2 said:

> *"The continuous relationship with one doctor gives people confidence and improves the relationship. The doctor may be more honest because*

he knows the patient and has been following him up. This relationship gives the doctor the chance to study the case in more depth and the patient feels able to ask more questions because he feels comfortable with the doctor. "

The second group of informants thought a continuous relationship with one doctor important, but for this to be successful it had to fulfil certain criteria. For instance, P3 asserted:

"to a great extent, a continuous relationship between the doctor is important to ensure quality. Preferably the doctor should be the family doctor, know all the family members and remain in touch with them and therefore know the family problems....I prefer a long relationship with a female doctor. It is useful, too, if she gives me her telephone numbers for emergencies or her mobile number, i.e. there should be a connection line between us. I don't like to visit a doctor once only and that's it, the relationship is over, no."

P5 and P6 also viewed continuity of care as important but thought the doctor had to have attained a certain level of professionalism in order for this ongoing relationship to succeed. P5 said:

"If a doctor has mastered his profession and is sure of his medical expertise, I would prefer to have a long and continuous relationship with him. This is the quality that the patient looks for."

P8's remarks represented the third group of informants, who thought continuity of care particularly important for patients with certain illnesses:

"Continuity of care depends on the nature of the patient's illness. Its relationship to quality can be important to a certain group of people more than others, i.e., for example, if the disease is transitory like a cold or something like that, I don't think quality requires the continuation of care but, for some other conditions, the relationship should be continuous so that the doctor can gain experience and knowledge of the disease, as in the case of high blood pressure, diabetes, and so on. It is better for these cases to be continuously followed up because this helps both the patient and the doctor."

P4 slightly departed from the views of the three previous groups, although he agreed that continuity of care was an important issue. He focused more on the quality of the organisation and its management, and believed seeking different

opinions from different doctors did not contradict the issue of continuity of care. He said:

> *"The continuation of medical care is the basis of quality; the quality of the place and the quality of the management of the place are also important. Seeking the opinion of another doctor is also important for continuity of care because a difference in doctors' points of view may be best for the patient."*

Organisation of services

> *P1 commented: "an integrated staff is important for quality & I mean by that the doctors, nurses, devices, lab, & pharmacy."*

Informants pointed to a number of aspects related to the organisational process of their PHCs. Some informants commented on general issues related to the organisation of services, while others provided specific suggestions regarding organisation of services, such as availability of specialist doctors, doctors' working hours, the cleanliness of the centre, waiting areas, and availability of medication. Regarding general organisational issues, P8 commented:

> *"A suitable waiting area should be provided as well as a system for file delivery and a well organised reception area. All these provide quality because the doctor will know how many persons are in the waiting area and can expedite their entry process according to their morbidity conditions."*

On the other hand, P4 and P6 felt that putting the right doctor in the right position was a matter of organisation that should be carefully considered by managers. P4 said:

> *"A doctor who has studied orthopaedics cannot be an ophthalmologist. However, the patient's awareness of the diversity of skills offered by doctors in the centre can raise their view of the centre's professional quality and their perception of its management's organisational ability."*

P4 also remarked that doctors' working hours was an important issue for both patients and doctors. He believed this to be an organisational matter which had a direct impact on the relationship between the doctor and his patients. He argued that doctors working one long shift were more likely to be productive in their

duties than those who worked in two shifts separated by a few hours break. He contended:

> *"I think one continuous working period is better than two shifts separated by a few hours' break because the doctor is a human being like us and has other commitments, for example, business and family matters to attend to. One continuous period from the morning till 5 or 6 pm is better, because if the doctor goes home, sleeps and then wakes up for an evening duty, he will not give the same attention as he has given in the morning."*

P6 viewed cleanliness in the primary care centre as not only an organisational matter but also related directly to patients' health, especially those with respiratory illnesses:

> *"In my view, the external and internal cleanliness of the clinic is important. On my last visit, the clinic area wasn't extremely dirty but it wasn't clean either. It was dusty and because I come to the clinic as a treatment place for my asthma, cleanliness is of paramount importance. A very slight dust can cause me shortage of breath. There are some people who are in a worse condition than me and dust can cause them bigger problems. The doors of the clinic were left open and let in the dust. In my view, those in charge of running the clinic and the workers themselves are not sufficiently aware of patients' health conditions, should be better informed, and given clear guidelines as to what procedures and practices should be followed to minimise hazards to patients with chronic respiratory problems."*

The availability of medication attracted almost all informants' attention. Almost all informants considered the availability of free prescribed medication a very important issue. The majority of informants also appeared to agree that the free medication available from their primary care centre was increasingly inadequate.

However, informants were divided in their views on why free medication was important and why the quality of free medication had started to decline. P4 suggested that even if prescribed medications were available at the primary care centre, their quality was lower than those available elsewhere (presumably those with well-known brand names). He said:

> *"The medications available in government clinics are of lower quality than those in the external market; that is why most patient buy their medications from outside. We are suffering from their poor quality."*

P1 provided an explanation for why medication provided by the government was considered by some patients as of lower quality than that provided by private establishments. In his view, the government was allocating enough money for PHC services to buy medication but the money was not being used to buy quality medication:

> *"Because the country is buying medications via competitive bidding, I believe that the amount of money being especially dedicated to buying them is not being spent as it should be, since when I go to the pharmacy I do not find the medication which the doctor has prescribed for me is available. The pharmacist tells me that good medications are costly and difficult to find or to supply at competitive prices."*

Waiting areas also attracted informants' comments and they offered suggestions and views regarding the use of these facilities. Most informants felt that patients wasted valuable time when waiting for appointments in the waiting area, and this time should be utilised in a productive way, for example, by providing health education and entertainment for young patients. P3 also considered the current use of such facilities was unsatisfactory. She said:

> *"PHC administrators must take more of an interest in waiting rooms, for example, put books, a television or medical magazines in them to entertain the patient while waiting or give the patient important information for his/her benefit, especially since waiting times can be as long as an hour or two. They must take this into account and provide toys for children. They should help the patient make good use of the time s(he) has to spend before meeting the doctor."*

Referral system

Informants appeared to differently perceive referral from primary care centres to specialists in hospitals. First, informants agreed that referral is a patient's right. Second, they recognised that referral might be restricted for different or unconvincing reasons. Regarding referral as a patient's right, P8 stated:

> *"At a certain stage, the doctor must decide how to treat the case in front of him, to refer it to another doctor, who is a specialist, or consultant, or make an appointment for surgery, for example. In other words, the doctor should not risk treating the patient if he isn't certain about his condition. He shouldn't try any treatment he is not sure will work."*

P2 viewed referral to a higher care level as inevitable since the primary care centre is limited on some aspects of care. He said:

> *"Referral is compulsory since the health centre has limited capabilities and must refer the patient to the hospital."*

With regard to referral restrictions, all informants viewed this as an important issue. The concept of gate-keeping was not explicitly discussed, but some informants thought the hospital played a role in referral control. P1 and P4 considered the referral issue a shared responsibility between the primary care centre and the hospital and suggested that it would not work well unless the two sectors agreed upon some form of arrangement to make the process smooth and easy for patients. They warned that if such arrangements were not available, then the doctor could "possibly use referral to get rid of you". On the other hand, although P2 agreed that referral is a good procedure for both the primary care centre and the hospital, because "reducing the number of patients referred helps lessen the pressure on the hospital", nevertheless, if misused, this issue could cause the patient to look for an alternative care provider. He said:

> *"If the doctor is reluctant to refer you to the hospital although the hospital is asking for this, the patient is forced to find another solution like going to a private clinic or a private hospital or to another doctor who will refer him."*

P3 also suggested that limiting the number of referral cases to hospitals was an important issue and primary care centres should be equipped with a sufficient number of doctors and specialists to reduce hospital referrals. P4 argued that the use of unconvincing restriction or denied referral to a higher level of care was due to doctors' reluctance to refer patients to hospital for the following reason:

> *"Regarding the referral issue, you find unfortunately that some doctors, especially the older ones, think they are able to treat all diseases, and feel upset if the patient asks for a referral. By doing so they consider the patient is implying they are incapable of diagnosing their condition correctly or their treatment methods are inadequate. If the doctor is honest with himself and recognises his duty, he knows that if he is unable to treat the case, he should refer it immediately."*

P6 held a similar view, indicating that referral restriction should not be a customary habit but the medical condition of the patient should be the criterion on which doctors based their referral assessment. She said:

> *"Some doctors say, 'I have a policy which is: I don't refer anyone to the hospital'. The doctor is making out that he understands every thing, therefore doesn't need to refer you to a specialist. This, of course, lacks quality because the patient's condition should be the basis on which a referral is made, not the doctor's arrogant assumption that he can treat all conditions, all illnesses."*

Psychological issues and their links to quality of care

> *P5 commented: "Part of the treatment is the psychological comfort. I'm sure that 70 % of present diseases are due to, although I'm not a doctor, psychological stress or strain."*

Most informants viewed emotional and psychological issues important aspects which should be addressed during the doctor-patient consultation. Some informants not only linked these issues with patient recovery, but also believed them important for patient compliance with doctors' instructions and their trust in the treatment given. However, informants differed in their opinion of how the doctor should approach psychological needs and what other external factors might influence patients' psychological concerns.

With regard to patients' preferred approach, P3 suggested interaction between the doctor and patient an important step to address psychological needs. She commented:

> *"The doctor must show psychological acceptance of the patient. Her questions must relate not only to the disease but also elicit any concerns or fears that patient may have which may be contributing to his/her ill health. There must be an interaction between the patient and the doctor so that the doctor is able to reach the required accurate diagnosis."*

P4 and P7 held a similar view in that they thought a doctor's role is to treat his patient like a friend and to listen to his concerns and needs, which they believed important for patient recovery. P4 commented:

> *"When you deal psychologically with the patient the doctor gets to know his circumstances, I mean his health circumstances, and the way*

> *he copes with or seeks solution to them, i.e. the doctor should make the patient a friend or an intimate friend, so that the patient trusts him and trusts the treatment he receives from him to change from the desperate stage of the disease to the curative stage."*

Despite informants' emphasis on doctors' role in paying attention to patients' physiological needs, some informants suggested other factors play an important role in patients' psychological status besides their illness. These include the nature of the illness, waiting time before being seen, and the length of medical consultation. P1, P5, P7 and P9 considered these factors equally important in understanding patients' psychological needs. P1 said:

> *"Suppose all patients are sick, their conditions are not the same, therefore their psychological needs will vary. Regarding their sickness, patients will be under great stress because of their poor health, so if waiting time is elongated this will also affect them. but if the time can be shortened, this will have a very positive effect."*

Further, P4 and P9 suggested that if patients' psychological needs are not addressed, this might force them to either treat themselves or look for alternative treatment elsewhere. P4 referred to health care services abroad as the perfect health care scenario for him. He said:

> *"In hospitals abroad, when the patient comes, health care professionals sit with him, talk to him, and treat him psychologically before they treat him medically, so that this patient will trust the doctor who is diagnosing him."*

P5 departed from these views and suggested that receptionists' nationality was an important factor contributing to patients' psychological well-being. He remarked:

> *"When the employee at the reception is a Saudi or a son of your soil, and he interacts with your situation, you feel psychologically comfortable."*

However, his remarks refer to a general feeling of psychological comfort, not the specific psychological stress that is related to illness.

Communication with the doctor

P1 said: "He came to know the reason behind the disease."

Almost without exception, informants viewed communication with their doctors as very important, particularly in two areas: the provision of necessary information, and informed decision-making. However, informants held different views regarding their satisfaction with current doctors' attitude in these areas. One group felt doctors provided needed information and helped their patients reach an informed decision, whereas the other group felt completely the opposite, and suggested there was a critical deficiency in the information doctors provided to patients, and criticised their paternalistic approach. Informants' rank and status appeared to influence their views, since most informants who enjoyed good communication with their doctors were high-ranking officers as in the case of P1 who remarked:

> *"The doctor explains everything to me. I do not believe he holds back any information. When I ask him, for instance, about a specific disease or a specific treatment, he gives me the answer straightaway, even though I may be taking up time that belongs to another patient."*

P5, a lieutenant colonel, expressed a similar view of good communication between patient and doctor. He said:

> *"There is a noticeable human touch in the primary care system, and for this reason I think doctors treat their patients with sensitivity, understanding and honesty."*

P6 supported this view but also felt that because doctors are experts in their field they should be trusted and not questioned by patients who lack the expertise to judge their decisions. He stated:

> *"Some people antagonise the doctor, for example, if the doctor writes out a medication, they may say, 'I've taken it previously but it didn't help'. The doctor knows more than the patient and would never prescribe a wrong medication for the patient. It is impossible for the doctor to prescribe a medication for the patient which he doesn't need."*

P2, also a high ranking officer (a brigadier), felt it patients' role to encourage doctors to supply them with needed information and not wait for doctors to ask them what they want to know. He said:

> *"If the patient insists on asking him for information, then the doctor is forced to show concern and may use the Internet to search for information about the topic if he has poor information."*

P2 also pointed out that patients today are not naive because they are generally well educated.

> *"The doctor must realise that patients are able to make informed decisions, because most now are educated and not that simple."*

P5 described patient need for information as follows:

> *"The general knowledge of people varies. You generally need a short time with people to explain medication usage and so on, but there are others to whom the doctor needs to repeat the explanation more than once, since their general knowledge may be limited. Moreover, some Saudi patients may not be able to read and will have to depend on the doctor for everything, i.e. explain the written instructions on the bottle of medication. Generally speaking, this issue is very sensitive since it can give the doctor a negative impression about the patient, so it is important."*

P3 and P4 expressed negative views regarding their communication with doctors. P3 commented:

> *"Unfortunately, communication is almost non-existent since the doctor generally rejects any discussion process with the patient and usually doesn't consult the patient regarding the medication. Or if s(he) does ask if the patient has taken it in the past, does not ask if it was suitable or not. Usually the doctor will say, 'this is my profession and I know what I'm writing. You go and get the medication and that's it. They usually infer that you don't have any right to discuss any issue. If you argue or attempt to discuss a matter further this suggests to the doctors that you are dissatisfied with their practice and you should go and see another doctor if this is the case. Their attitude is a big problem and makes me very uncomfortable at the health care centre. I like the type of doctor who will listen to me."*

P8 departed from other informants' views since he felt PHC doctors did not need detailed information about patients because usually primary care patients suffered only minor illnesses:

"The PHC doctor does not need a lot of information about the patient, and this is what signifies primary health care, i.e. the doctor for example, should know something about the patient but not in the depth the specialist or consultant needs. Moreover, I don't think the more information the doctor has, the better the quality of the examination, because the patient visits the primary care doctor for simple & transitory problems."

Enablement

Most informants perceived enablement as an important part of the doctor-patient encounter. P4 linked enablement with patients' compliance with medical treatment. He said:

"If the patient is convinced with the treatment and with the diagnosis the outcome will be totally different. In my view, 80% of patients who receive medication without being convinced of its efficacy and without knowing what the diagnosis is, will not use it for the complete period, like 5 days for antibiotics and pain medicine. When the patient feels any initial improvement he stops the medication immediately."

Doctor-patient relationship

P1 defined his ideal doctor-patient relationship as:

"An understanding between the doctor and his patient, maintaining confidentiality of information, and scientific honesty from the time the patient walks inside his clinic and start talking openly, because he is talking to someone who protects his secrets and answers him honestly."

P1 and P3 suggested that overbooked clinics might affect the doctor-patient relationship as busy doctors do not have sufficient time to get to know their patients and develop close human relationships. P1 said:

"I always try to be as brief as I can while visiting the doctor, because I know there are other patients besides me, and each minute that passes will be subtracted from the time of the next patient. All people should bear this in mind."

P3 also suggested that part of the doctor's role is to get to know their patients' background such as their families, work status, etc., to develop a closer doctor-patient relationship.

Doctors' knowledge of patients

All informants agreed on the importance of the doctor's knowledge of his patients. Informants felt such knowledge was an important issue and linked directly to patients' treatment and outcomes. However, despite their agreement, some informants felt that the type of illness played a role in how much knowledge the doctor possessed about his patient. P1 commented:

> *"Knowledge varies from one doctor to another and from one condition to another. If the doctor gets the complete medical history before the clinical examination, the clinical examination will help to achieve a more accurate diagnosis of the problem."*

P1 further argued that a doctors' knowledge of his patients should extend to include other aspects of a patient's life, such as his community, family, etc., because some illnesses are related to particular regions or family genetics. P3 held the same view and said:

> *"It is very important that the doctor knows enough of the medical history of the patient either the current or previous one, & also his social status and psychological status, since all these play a big role in the quality process."*

Interpersonal care

> *P6 commented: "Manners and attitude and dealings with patients are most important."*

All informants considered interpersonal care a crucial issue for both the patient and doctor. However, most informants also agreed that such care does not exist if the doctor is very busy. P1 referred to this situation as follows:

> *"The number of patients who visit the doctor affects the psychology of the doctor, because when the doctor sees 19 patients he has more time to spend on each one than when he sees 50. The much larger number does not allow the doctor to concentrate fully on each patient."*

P2 also suggested that if management forced doctors to spend a longer time with patients this could cause long delays for other patients. He remarked:

> *"The doctor can be forced to give the patient additional time but this can cause delays and boredom to other people."*

P5 believed in a minimum level of interpersonal care, which he described as follows:

> *"I don't welcome talking only, the doctor should limit his relationship with the patient by professional restrictions i.e. it should be neither a completely personal relationship nor a dry relationship that lacks humanity."*

P3 described her negative experience in a doctor's clinic which had made interpersonal care more important to her because it assured privacy and dignity. She said:

> *"I encountered a bad situation with her [the doctor]. She used to let two patients walk into the clinic at the same time because of the crowd of patients. She used to measure the blood pressure of one while the other was lying on the examination bed, all were in the same room at the same time in full view of each other, and that made many people feel uncomfortable. I was one of them: why should two patients be with her at the same time? Every patient needs privacy. She showed a total lack of consideration for her patients' needs and feelings even if she was famous."*

Receptionists' care

> *P9 said: "Receptionists are the centre of the centre."*

Receptionists' role and attitude were described by most informants as crucial in primary care centres. P2 commented:

> *"The receptionist is on the whole the key to quality. Why? Because s(he) is the first person the patient interacts with."*

P5 shared a similar view about the importance of receptionists' care and added that receptionists' manner of expression was an important issue and could play a role in patients' satisfaction. He said:

> *"The first impression plays the largest role in the satisfaction and non satisfaction process: if the receptionist is tactful or not or neglectful or speaks the same language, makes you angry, etc. These all influence your level of satisfaction."*

P8 also suggested receptionists should undergo medical training to enable them to assess patients' conditions and decide who should go first or wait to see the doctor.

> *"Receptionists should be good and should be familiar with morbidity conditions so they can expedite the entry process and ensure patients who need to see the doctor urgently are evaluated as emergency cases and do so. The most important thing is to be tactful with the patient so that s (he) appreciates the receptionists' work."*

Other informants, namely, P3, P4 and P9, considered receptionists' role important, but had had negative experiences with them. P4 said:

> *"If you talk to one of them, he talks to you as if he were the director of the hospital. He doesn't show any interest in or concern about your condition. Of course, there are good receptionists, but they are very few."*

Nursing care

All informants agreed that the nurses' role is almost as important as the doctors' role in any health care services. However, much of their discussion centred not on nurses' role as they already accepted its significance, but on their own views towards nursing care and how they thought it could be improved. P7 stated:

> *"The nurse should seek perfection in his/her work because the doctor has to examine but the nurse is the one who measures the temperature and blood pressure, i.e. if these are wrong, the doctor may give you the wrong medication."*

Most informants also considered the employment of trained nurses very important and thought current nursing staff should undergo continuous training to improve their skills and ensure patients' safety. According to P8:

> *"The nursing staff are very important and their work is essential since the doctor can't do anything without them. But to maintain high quality standards, up-to-date facilities should be provided and they should undergo periodic retraining in how to deal with people and carry out their work procedures effectively. For example, training is very important in the sterilisation process, and so on."*

Gender, culture and religious issues

> *P3 stated: "we are a society that values privacy, but more than that, we are women and the way we are treated must be in line with Islamic values."*

All informants, particularly females, expressed strong concerns about gender, and cultural and religious requirements. Female informants indicated that being a woman in a society like Saudi Arabia required PHC professionals to act in line with cultural and religious requirements and constraints. P3 elaborated on this as follows:

> *"As regards religious requirements, I want to see a female doctor and not a male one because of Saudi customs and traditions. Moreover, because I'm a woman, only a woman like me can understand female medical and health problems. Also, a female doctor usually diagnoses better than a male doctor. I also feel more comfortable with a female doctor because I can talk to her freely. If the doctor were a man I wouldn't be able to talk so freely and I might become shy or he might become shy when examining a woman. Even a male patient may feel the same. For example, once my husband went to the clinic of a female dentist. She examined him but he wasn't comfortable at all. He even noticed that the doctor wasn't at ease, was very shy, and the result was a bad diagnosis and the treatment given was incorrect. The religious factor is very important and it governs us. If a woman goes to a woman, a man to a man, the diagnosis is correct and all feel comfortable, both the doctor and the patient. "*

Male and female informants also agreed health care professionals' language was an important issue for them, not only to facilitate communication and understanding but also to develop a good relationship with them. P3 commented:

> *"Receptionists sometimes don't understand what we say and we don't know how to talk to them, i.e. they call every woman 'mama' [Arabic slang for mother] and every man baba [Arabic slang for father]. Sometimes their religion is different and this can be a problem. They don't know our customs and traditions."*

Despite expressing a particular concern to see a doctor of the same gender, P9 felt this option was not always available to her because of the lack of female doctors which meant she had to accept seeing a male. She said:

"I cannot decide which doctor I want to see, especially if I want to see a female doctor and one is not available because of the shortage of female doctors. There might be one or sometimes there might not be one at all which forces me to see a male doctor, especially when I am very ill, because waiting to see a female doctor is longer than waiting to see a male one."

Community participation

Community participation elicited unanimous support from patients as to its importance for both the community and the primary care centre. P7 said:

"This issue is important because it reflects much of the social symbiosis recommended by the Islamic religion and also advocated by our prophet. Therefore, if the people agree to assist the health centre, it will be fine and, for sure, there will be some development in the centre's work."

As reflected in P7's comments, other informants felt the importance of community participation was rooted in Islamic cultural values and traditions. P5 suggested primary care centres should play a central role in the community like the local school and mosque.

"The clinic's role should be similar to that of the school or mosque, most people are ignorant of the benefit of the services it provides."

However, one informant appeared to view community participation in the primary care centre as virtually non-existent. Although P9 considered community participation an important issue, she believed little had been done to establish a relationship between the centre and the community. She said:

"If they were to ask me to suggest something to improve the centre's quality I would suggest participation with the society, such as raising awareness of the importance of breastfeeding and distributing brochures about illnesses and epidemics to establish a relationship between the centre and the community."

Overall satisfaction and quality

Informants were split in their views regarding the link between overall satisfaction and its relation to quality of services. One group of informants, represented by P1, believed that quality and satisfaction were interdependent and the presence of quality assured satisfaction. In other words, this group of

informants felt being a satisfied patient meant that the services received were of good quality. P7 said:

> *"Quality and satisfaction are tied to each other, because the patient who experiences high quality will certainly be fully satisfied & vice versa."*

P3 represented the other group of informants who felt that being a satisfied patient did not mean services received were of good quality but that satisfaction in this case was no more than appreciation for what had been received and was not related to quality of service. She stated:

> *"Mere satisfaction doesn't represent any link to quality because sometimes you are satisfied because you appreciate what you have received and not because what you have received is of high quality. Sometimes we thank God because we've got the medication free and that's it, but the satisfaction is not an indicator of quality. I don't think they are related."*

P8 felt that primary care management should examine areas of deficiency which lead to patient dissatisfaction before patients actually encounter them. He argued that a patient walking out satisfied is an indicator of quality. He commented:

> *"Because health care is a customer service process, providing the service deficiently will surely cause patients' dissatisfaction and vice versa... patient awareness is very important and the clinic should investigate reasons for patient dissatisfaction and seek solutions to avoid it."*

6.5. SURVEY INSTRUMENT DEVELOPMENT

The decision as to which domains should be included in a questionnaire to assess patients' views on health care quality has to be based upon pre-knowledge of what are important aspects of quality of care to patients. This study qualitatively found informants confirmed the relevance of the GPAS ten original scales and viewed all ten as important determinants of PHC quality in Saudi Arabia, hence they were all taken on board. Four extra dimensions also emerged from semi-structured interviews.

Data shows that cultural diversity and sensitivity was a very crucial issue to Saudi patients when they reflected on quality of care. Evidence also indicated that issues such as organisation of services, availability of medication, and psychological reassurance were fundamentally important to patients.

Therefore, the four additional domains qualitatively identified from patients' interviews were added to the pre-existing ten domains identified by the GPAS, resulting in fourteen domains (36 items) in the questionnaire for use by the researcher after modification to address Saudi Arabia's unique cultural circumstances. Questions about marital status and transport to the PHC were rephrased (e.g. GPAS identifies the bicycle as a transport option to the PHC but this form of transport does not exist in Saudi Arabia. Similarly, the reference to 'ethnic groups' was omitted since this is not applicable to the Saudi context).

In order to address these extra dimensions effectively, a number of procedures were taken to ensure the reliability and consistency of the created extra questions. Firstly, the contents of questions created under the newly added domains were derived from patients' interviews. To ensure clarity and avoid ambiguity several steps were carried out to finalise the exact wording of each question (see the questions' wording in Appendix D). These steps included supervisors' advice and Saudi academics' feedback which assisted in producing questions that supported other GPAS questions in terms of wording and

structure. Accordingly, the finalised questions were included in the pilot phase. Secondly, the piloted version of the questionnaire was tested by interviewing 24 patients who provided further feedback to increase the questions clarity and comprehensibility (see chapter 5 section 5.7.9). Finally, to evaluate the questionnaire's reliability Cronbach coefficient alpha was used and the score of each scale was found to be high (ranging from 0.6 to 0.9)

The researcher's modified version of the GPAS contained the following domains (a table of the full list of items making up each domain can be found in Appendices D of this thesis):

- Access
- Receptionists
- Continuity
- Communication
- Interpersonal care
- Knowledge of patients
- Referral
- Enablement
- Practice nursing
- Psychological issues (newly added scale)
- Religious and Cultural issues (newly added scale)
- Organisation of services and availability of medication (newly added scale)
- Community Participation (newly added scale)
- Overall satisfaction

Table 6.3 reiterates patients' views on each GPAS scale and their views on extra dimensions identified in this study.

Table 6.3: GPAS scale and selected quotes

Quality attributes	Patient informants' selected quotes
1) Access of care	P6: "generally waiting is accepted and is natural, but there is unfairness in the entry process if, because the doctor is my friend or my acquaintance, I am able to enter his room before anybody else. This is not related to quality at all and is not fair in the first place."
2) Continuity of care	P2: "The continuous relationship with one doctor gives people confidence and improves the relationship. The doctor may be more honest because he knows the patient and has been following him up. This relationship gives the doctor the chance to study the case in more depth and the patient feels able to ask more questions because he feels comfortable with the doctor. " P6: "the continuation issue is important because if the doctor is bad and the way s (he) deals with patients is bad, then changing the doctor would be better."
3) Organisation of services	P4: The medications available in government clinics are of lower quality than those in the external market; that is why most patients buy their medications from outside. We suffer from their poor quality." P3: PHC administrators must take more of an interest in waiting rooms, for example, put books, a television or medical magazines in them to entertain the patient while waiting or give the patient important information for his/ her benefit, especially since waiting times can be as long as an hour or two. They must take this into account and provide toys for children. They should help the patient make good use of the time s (he) has to spend before meeting the doctor."
4) Referral system	P2: "Referral is compulsory since the health centre has limited capabilities and must refer the patient to the hospital." P4: "Regarding the referral issue, you find unfortunately that some doctors, especially the older ones, think they are able to treat all diseases, and feel upset if the patient asks for a referral. By doing so they consider the patient is implying they are incapable of diagnosing their condition correctly or their treatment methods are inadequate."
5) Psychological and	P5: "Part of the treatment is the psychological comfort. I'm sure that 70 % of present diseases are due, although I'm

emotional issues	not a doctor, to psychological stress or strain." P4: "In hospitals abroad, when the patient comes, health care professionals sit with him, talk to him and treat him psychologically before they treat him medically, so that this patient will trust the doctor who is diagnosing him." P1: "Suppose all patients are sick, their conditions are not the same, therefore their psychological needs will vary".
6) Communication with the doctor	P6: "Some people antagonise the doctor, for example, if the doctor writes out a medication, they may say, 'I've taken it previously but it didn't help'. The doctor knows more than the patient and would never prescribe a wrong medication for the patient. It is impossible for the doctor to write a medication for the patient which he doesn't need." P2: "If the patient insists on asking him for information, then the doctor is forced to show concern and may use the Internet to search for information about the topic if he has poor information." P4: "Unfortunately, communication is almost non-existent since the doctor generally rejects any discussion process with the patient and usually doesn't consult the patient regarding the medication. Or if s (he) does ask if the patient has taken it in the past, s (he) does not ask if it was suitable or not".
7) Enablement	P7: The doctor should assure the patient that his condition is curable but he must be frank with him. However, if the doctor thinks the patient is too scared, he may hide some information from him and tell it to one of his family members or friends... of course he should tell him that if he maintains the medication, the illness will disappear, and he must check him from time to time, but it is wrong, for example, to tell the patient that he has no hope of recovery."
8) Doctor's knowledge of patients	P3: " It is very important that the doctor knows enough of the medical history of the patient, either the current or the previous one, & also his social status and psychological status, all these play a big role in the quality process."
9) Interpersonal care	P3: "I encountered a bad situation with her [the doctor]. She used to let two patients walk into the clinic at the same time because of the crowd of patients. She used to measure the blood pressure of one while the other was lying on the examination bed, all were in the same room at the same time in full view of each other, and that made many people feel uncomfortable. I was one of them, why should two patients be with her at the same time? Every patient needs privacy. She showed a total lack of consideration for her patients' needs and feelings even if she was famous."
10) Receptionists' care	P9: "Receptionists are the centres of the centre." P2: "The receptionist is on the a whole the key to quality. Why? Because s (he) is the first person the patient interacts with."

11) Nursing care	P6: "The nurse should seek perfection in his/her work because the doctor has to examine but the nurse is the one who measures the temperature and blood pressure, i.e. if these are wrong, the doctor may give you the wrong medication."
12) Gender, culture and religious issues	P3: "We are a society that values privacy, but more than that, we are women and the way we are treated must be in line with Islamic values." P9: I also feel that a female doctor has a better understanding of my problems because she is a woman like me, but the most important reason for seeing a female doctor is to avoid uncovering myself in front of a man as my religion and modesty forbid this." P2: "If the receptionist doesn't speak Arabic and she pronounces my name wrongly this conveys a negative impression. If a nurse pronounces your name wrongly, so that you don't understand it, you may miss your appointment. This is something negative and incorrect."
13) Community participation	P5: "if there was some sort of bond, let's say a social one, between the centre and the people of the locality, believe me the centre would be more efficient… The clinic's role should be similar to that of the school or mosque. However, most people are ignorant of the benefit of the services it provides."
14) Overall satisfaction	P7: "Quality and satisfaction are tied to each other, because the patient who experiences high quality will certainly be fully satisfied & vice versa." P8: "Because health care is a customer service process, providing the service deficiently will surely cause patients' dissatisfaction and vice versa, i.e. quality is when the patient walks out of the clinic satisfied. Thus, patient awareness is very important and the clinic should investigate reasons for patient dissatisfaction and seek solutions to avoid it."

6.6. SUMMARY

This chapter has presented important issues as seen and experienced by patients. It has sought to examine qualitatively patients' views on PHC and its quality in order to develop a conceptual understanding of what these issues mean to lay patients and to inform the development of the study's main quantitative tool to be distributed to a larger number of patients to elicit their views on quality attributes.

Data analysis of this phase indicated that fourteen quality attributes were of particular significance to informants, namely, access; receptionists' care; continuity of care; communication with doctor; interpersonal care; doctor's knowledge of the patient; referral; enablement; practice nursing; psychological issues; religious and cultural issues; organisation of services and availability of medication; community participation; and overall satisfaction.

An extended version of the General Assessment Practitioners' Survey (GPAS) was then produced based on the above outcome. Thus, this part of the qualitative analysis fulfilled the first objective of this thesis. However, informing the development of the study's main survey tool is only part of the aim of thoroughly analysing patients' views. The other aim is a robust analysis of patients' beliefs and views about various issues related to their health care provided at the primary level in order to enrich understanding of primary care services as seen through their eyes and, in practical terms, to compare their views with those of key health care informants (service managers, doctors, and policy makers). One important message which emerged from the data was informants' limited awareness of primary care's preventive role compared to their knowledge of quality and their specific views on what they regarded as good or bad quality. They provided several examples to illustrate the level of quality they wanted, particularly from the private sector, e.g. drug quality, comfort and cleanliness, ease of access, and a customer oriented relationship. The private

sector does not usually promote preventive care unlike governmental primary care, which may explain why informants were more aware of curative needs than preventive needs. Another important finding was informants' tendency to passively participate in primary care activities. They seemed to show no desire for active involvement in the PHC services they received. For instance, although community participation was considered an important aspect by patients, it seemed informants expected such activities to be automatically rendered. This apparent contradiction will be further discussed in chapter nine of this thesis.

The next chapter presents an analysis of findings derived from the patients' survey instrument.

CHAPTER 7. PATIENTS' SURVEY: DATA ANALYSIS

7.1. INTRODUCTION

This chapter presents the findings of the quantitative data derived from the patients' survey carried out in twelve PHC centres belonging to both MoI and MoH sectors in Riyadh city between 30th June 2003, and 28th September 2003. The aim of this chapter is to address two of the study objectives namely: (i) To assess patients' views on the quality of primary care; and, (ii) To compare the quality of PHC provided by the Ministry of the Interior and the Ministry of Health, as perceived by patients.

For clarity, throughout this chapter, a comparison of the quality of PHC services provided by the MoI and MoH is undertaken. In other words, the two objectives are addressed simultaneously.

The following section describes the analysis strategy.

7.2. ANALYSIS STRATEGY

Five different stages of data analysis are described below:

7.2.1. *Stage one*: characteristics of participants

The first stage presents a descriptive profile of study respondents (from both MoI and MoH sectors). This focuses on respondents' sociodemographic variables, such as age, gender, employment, overall health, etc. Means and standard deviations were generated for continuous variables, such as age, while frequencies, percentages, and tabulation were generated for binary and categorical variables, such as gender. In order to identify possible trends in the data, this stage also examines the grouping of continuous variables, such as age,

into categorical variables (e.g. age groups from 18-30, 31-45 etc.). For simplicity, and due to the nature of the descriptive analysis and, as explained in chapter 5, section 5.7.13, the small number of clusters available, standard statistical tests without adjusting for clustering, such as chi-square, are used in this stage.

7.2.2. *Stage two*: Patients' views on the quality of PHC services

The second stage looks at three different levels of analysis: MoI and MoH respondents' evaluation of quality of services; Saudi respondents' scores compared to UK benchmark scores; and, finally, a statistical account of items not included in the final calculation for some quality scales. Therefore, stage two has four sub-stages which are:

Sage 2:1

Respondents' evaluation of the quality of PHC services (aggregated results per sector): this involves crude analysis of respondents' final scores for each of the 14 quality attributes as evaluated by MoI and MoH respondents. Aggregated results for all centres under each sector are important to give an indication of the quality of care in each sector as a whole. Scores are presented using the GPAS scoring system (see Appendix D). All analyses are adjusted for clustering using a t-test (summary measures model).

Sage 2:2

Respondents' evaluation of the quality of PHC services (individual centres): this level of analysis presents final mean score results for each quality scale in each of the 12 PHC centres participating in this study. This level is important to identify centres which are better or worse than average.

Stage 2:3

Saudi results compared to U.K. benchmark results: This section compares MoI and MoH respondents' scores against the benchmark of the British GPAS published

scores, in order to identify those quality attributes that show a potential need for improvement.

Stage 2:4

Respondents' reported experiences: at this stage, measures are created to analyse respondents' reports of experiences (items in the questionnaire not included in the calculation of scales, e.g. "how long do you have to wait to be seen by your GP?"). This is done through tabulation and frequency tests.

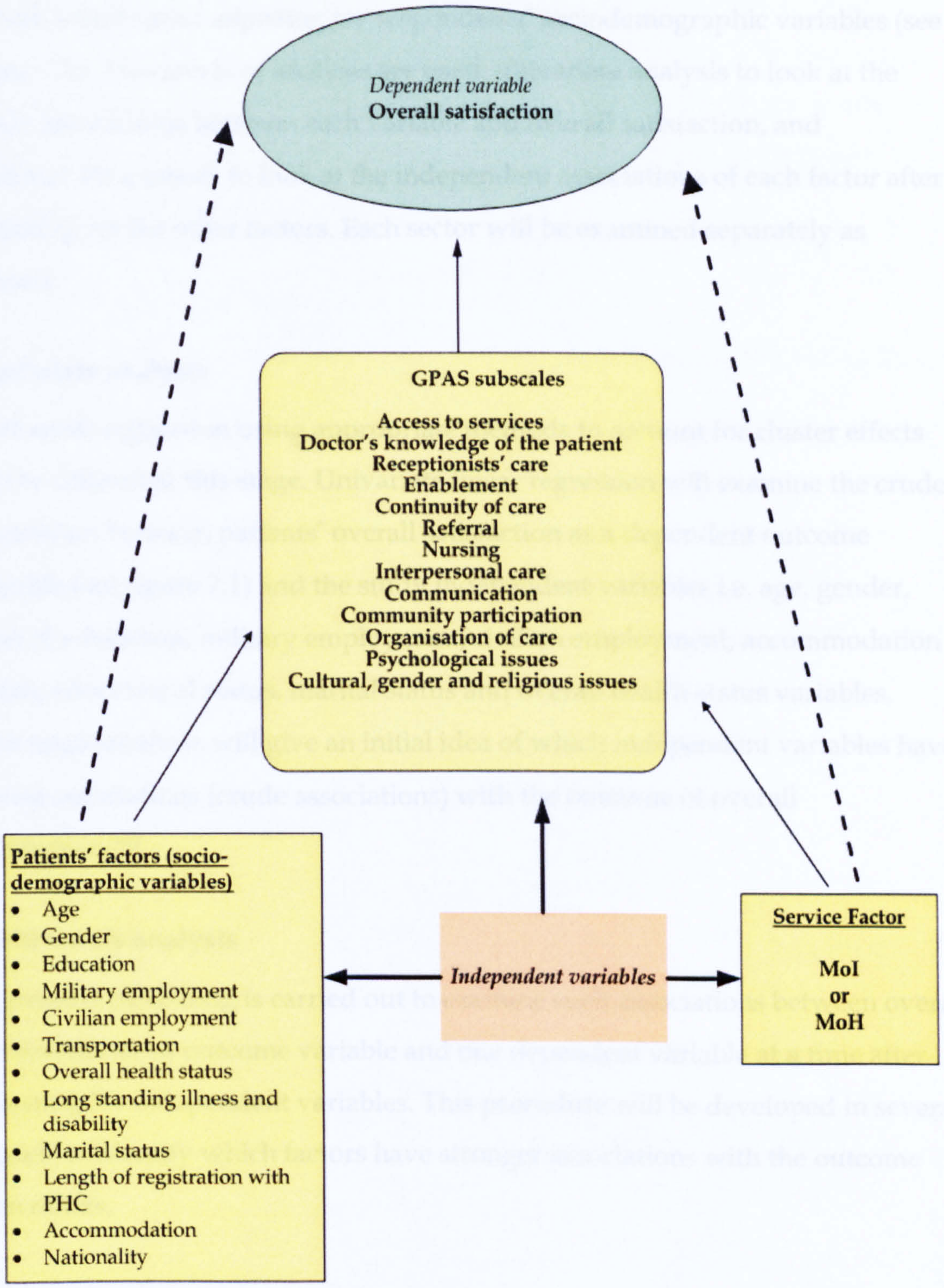
7.2.3. *Stage three*: comparison between MoI and MoH sectors before and after adjusting for patients' characteristics

Evaluation of MoI and MoH respondents' scores for the extended GPAS 14 scales identified in stage two are re-analysed after adjusting for respondents' independent variables. Utilising a random effects model to account for clustering, this stage aims to compare MoI and MoH sectors after adjusting for confounding effects of differences in their patient populations. At this stage, it is important to identify the dependent and independent variables used in this study (see figure 7.1).

As shown in figure 7.1, the main outcome variable (dependent) for this study is patients' overall satisfaction with primary health care. However, for the purpose of this stage, each of the GPAS subscales is treated as an outcome variable each time (i.e. for the evaluation of access, access is an outcome, etc.). The independent variables for this stage are composed of two groups: type of service (i.e. MoI or MoH) and twelve of the patients' sociodemographic characteristics which are commonly used in patients' satisfaction research.[331-335]

Figure 7.1: Dependent and independent variables used in this study

Schematic model of relationships



7.2.4. *Stage four*: the association between patients' socio-demographic characteristics and satisfaction

This stage involves creating an inferential analysis to examine overall satisfaction in both sectors after adjusting for respondents' sociodemographic variables (see figure 7.1). Two levels of analysis are used: univariate analysis to look at the crude associations between each variable and overall satisfaction, and multivariate analysis to look at the independent associations of each factor after adjusting for the other factors. Each sector will be examined separately as follows:

Univariate analysis

Univariate regression using appropriate methods to account for cluster effects will be utilised at this stage. Univariate linear regression will examine the crude association between patients' overall satisfaction as a dependent outcome variable (see figure 7.1) and the study independent variables i.e. age, gender, level of education, military employment, civilian employment, accommodation status, educational status, marital status and overall health status variables. Univariate analysis will give an initial idea of which independent variables have strong associations (crude associations) with the outcome of overall satisfaction.[292]

Multivariate analysis

Regression modelling is carried out to examine such associations between overall satisfaction as an outcome variable and one dependent variable at a time after adjusting for independent variables. This procedure will be developed in several models to identify which factors have stronger associations with the outcome than others.

7.2.5. *Stage five*: key determinants of satisfaction

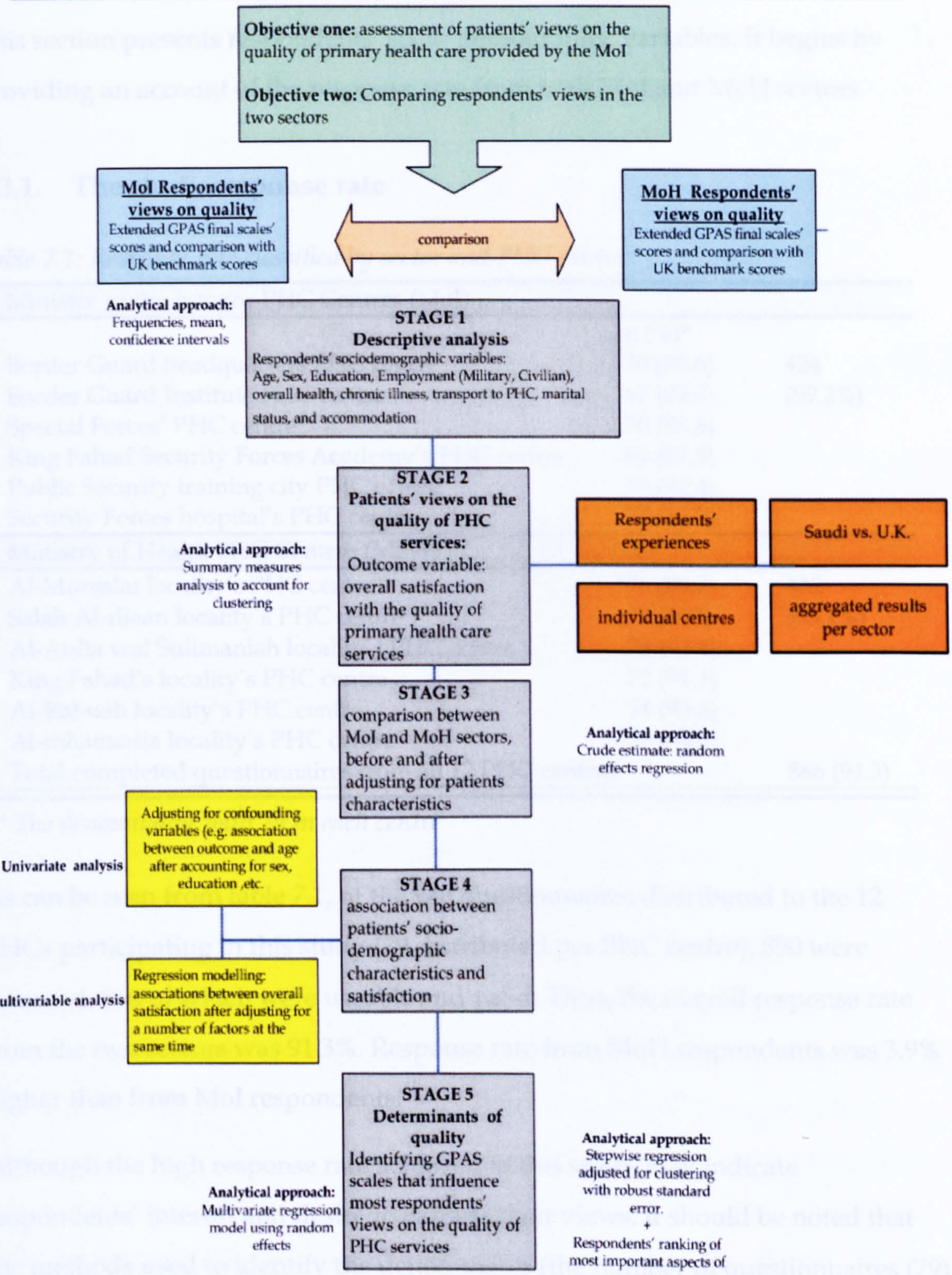
Lastly, this stage presents statistical analysis to identify key determinants of satisfaction with quality of health care. This is achieved through two different

approaches: the first involves executing a robust standard error stepwise regression adjusted for clustering to identify which of the extended GPAS scales has a stronger association with overall satisfaction (e.g. all scales vs. the last one). The second approach analyses respondents' responses from both sectors to the last question in the study questionnaire, which asked them to rank important aspects of primary care quality, and findings are compared with the results derived from the previous step. Figure 7.2 summarises the analysis stages presented in this chapter.

Analysis software package

Stata 8.2 for Windows was used to conduct this study analysis.[336] SPSS 11.5 was utilised to produce graphs.[337]

Figure 7.2: Analysis plan flowchart



7.3. STAGE (1): DESCRIPTIVE ANALYSIS

This section presents respondents' socio-demographic variables. It begins by providing an account of the response rate from both MoI and MoH sectors.

7.3.1. The study response rate

Table 7.1: Response rate classified by sector and PHC centre

Ministry of the Interior PHC Centres (MoI)		
	n (%)*	
Border Guard headquarters PHC centre	70 (88.6)	424
Border Guard Institute PHC centre	67 (84.8)	(89.2%)
Special Forces' PHC centre	70 (88.6)	
King Fahad Security Forces Academy's PHC centre	69 (87.3)	
Public Security training city PHC centre	73 (92.4)	
Security Forces hospital's PHC centre	75 (94.9)	
Ministry of Health PHC Centres (MoH)	n	
Al-Mursalat locality's PHC centre	71 (89.8)	442
Salah Al-diean locality's PHC centre	79 (100)	(93.1%)
Al-Aulia wal Sulimaniah locality's PHC centre	73 (92.4)	
King Fahad's locality's PHC centre	72 (91.1)	
Al-Rabuah locality's PHC centre	74 (93.6)	
Al-mhamadia locality's PHC centre	73 (94.4)	
Total completed questionnaires from all 12 PHC centres		866 (91.3)

* *The denominator with 79 in each centre*

As can be seen from table 7.1, of the 948 questionnaires distributed to the 12 PHCs participating in this study (79 distributed per PHC centre), 890 were returned, 866 of which were useable and valid. Thus, the overall response rate from the two sectors was 91.3%. Response rate from MoH respondents was 3.9% higher than from MoI respondents.

Although the high response rate achieved in this study may indicate respondents' interest and desire to express their views, it should be noted that the methods used to identify the denominator (the number of questionnaires (79) to be distributed to each PHC centre) may have omitted some patients which might inflate the response rates. Hence, their interpretation should be viewed with caution. This will be discussed in detail in chapter nine.

7.3.2. Socio-demographic characteristics of study respondents

Age

Study respondents had a mean age of 32 years (SD=10.78), ranging from 18 to 75. The mean age of respondents from MoI PHC centres as shown in table 7.2 was 32.4 years (SD= 10.1) compared to 33.2 (SD= 11.4) for MoH PHC centres.

Table 7.2: Average age per sector

Age (years)	Obs	Mean (95% CI)	Median
MoI	423	32.4 (31.4, 33.3)	30
MoH	442	33.2 (32.2, 34.3)	31
MoI &MoH	865	32.8 (32.1, 33.5)	30

For statistical purposes and to identify possible differences among age groups, the age variable (originally in continuous format) was grouped into five categories (see table 7.3). However, looking at table 7.4, the age group distribution between the two sectors followed a similar pattern. A chi square test further indicated that variation among age groups was not statistically significant, as the corresponding p-value was 0.19.

Gender

Male respondents outnumbered females nearly 2 to 1. However, as can be seen from table 7.3, the proportion of females to males in the MoH sector was more evenly distributed. In contrast, in the MoI sample, male respondents outnumbered female respondents by three to one. The location of MoI PHC centres inside military barracks may have contributed to the much large number of male respondents in the MoI sample. The chi square test provided strong evidence ($X^2 = 38.3$, $p =<0.001$) to suggest a significant difference between MoI and MoH respondents in terms of gender. Table 7.3 presents a comparison between respondents for both sectors in terms of age group and gender. There was significant variation between the two sectors, mainly related to the number of female respondents, although a small variation between age groups also existed.

Table 7.3: Respondents' gender by different age groups

	Age group	Male =n (%)	Female= n (%)	n (%)	X^2	P value
MoI	18-24	75 (17.6)	45 (10.6)	120 (28.3)	15.6 DF (3)	0.001
	25-34	110 (25.9)	29 (6.8)	139 (32.7)		
	35-44	83 (19.5)	17 (4.0)	100 (23.5)		
	45-54	31 (7.3)	7 (1.6)	38 (8.9)		
	>55	21 (4.9)	6 (1.4)	27 (6.3)		
	Total	320 (75.4)	104 (24.5)	424 (100)		
MoH	18-24	62 (14.0)	51 (11.5)	113 (25.5)	0.7 DF (3)	0.85
	25-34	88 (19.9)	64 (14.4)	152 (34.3)		
	35-44	62 (14.0)	51 (11.5)	113 (25.5)		
	45-54	23 (5.2)	26 (5.8)	49 (11)		
	>55	10 (2.2)	5 (1.1)	15 (3.3)		
	Total	245 (55.4)	197 (44.5)	442 (100)	38.3 DF (1)	<0.001

Nationality of respondents

According to table 7.4, the majority of the study's respondents (94.3%) were Saudis. Non-Saudis who participated (usually expatriates), made up only 5.7% of total respondents from both sectors. The variation between MoI and MoH in terms of non-Saudi respondents may have been due to the militarised nature of MoI PHC services. Non-Saudis gain access to them only if they work for the MoI or are affiliated to a MoI member. In contrast, the MoH is a general health service provider and provides services to all people living in the Kingdom. The chi square test result between different nationalities provided strong evidence (X^2 =14.6, p = <0.001) to suggest a statistical difference.

Military employment

Table 7.4 shows the distribution of study respondents across the sectors according to military employment. It shows 93.4% of military employees completed questionnaires in MoI PHC centres and 6.5% completed questionnaires in MoH PHC centres. Despite the fact that the MoI is responsible for providing health care services to all military employees and their dependants, the data revealed a small number of military employees had completed their questionnaires in PHC centres belonging to the MoH sector. These military employees may have been members of other military forces (e.g. army or navy), since, in general, MoI personnel enjoy the benefit of being able to access all MoI

health care services and have full access to national health care services provided by the MoH.

Table 7.4 also indicates that non-officer military respondents and military cadets represented the largest proportion (71.3%) of military employees followed by officers who represented 26.8% of the sample. Retired military personnel represented the smallest group (5.5%). The chi square test used to examine differences between the two sectors with respect to the military employment variable, revealed no evidence to suggest (X^2 =7.6, p = 0.46) significant differences between the two sectors. Fisher's exact test was utilised, because table 7.4 contains very low frequencies,[325] and was 0.35, thus confirming the aforementioned finding.

Civilian employment

Six broad categories were included under this variable to reflect respondents' distribution according to civilian employment. As table 7.4 illustrates, MoI and MoH respondents were not evenly distributed. MoH respondents were twice as numerous as MoI respondents in all categories under the civilian employment variable. The large differences in respondents' occupational distribution between the sectors, particularly government employees, unemployed respondents, and private sector employees, may be partly due the fact that the MoI employs both military and civilian personnel, but military personnel far exceed civilian personnel. In the MoH sector, health care facilities are open to the general public regardless of employment status or who employs them. This may explain why there were more government employees and private sector workers among respondents in the MoH than in the MoI sector. Moreover, access to MoI health care facilities requires respondents to be full-time employees in this sector or retired from military services, which explains the large difference in unemployed respondents in the two sectors. Unemployed respondents who completed questionnaires in MoI settings probably gained access through a relative (father, husband).

Educational level

Table 7.4 shows that, generally, MoI and MoH respondents were fairly evenly distributed regarding their educational level. However, respondents who held degrees from a military establishment were more apparent in the MoI than MoH sector (10.9% and %0. 6, respectively). Graduates from military establishments are more likely to work for the MoI after graduation. Conversely, respondents who held university degrees were more apparent in the MoH than MoI sector (29% and 11.8%, respectively).

Accommodation status

This variable reflects the socio-economic status for participants. Table 7.4 shows the study sample is diverse in terms of accommodation status. Far more respondents in the MoH sector (62.1%) owned their accommodation than in the MoI sector (41.4%). This may be due to the transient life of military personnel, who tend to travel more, and change residence more often than civilians. This finding is further reinforced by table 7.4 which shows more MoI than MoH respondents rented accommodation (both from their employer and private landlords), which suggests MoH respondents were more permanent and MoI more transient residents. The chi-square test between MoI and MoH respondents provides strong evidence ($X^2 = 52.7$, $p = \leq 0.001$) to suggest differences between sectors in terms of the accommodation variable.

Transport to PHC centres

Although table 7.4 shows a relatively equal distribution between MoI and MoH respondents in terms of methods used to travel to PHC centres, variation does exist, which can be attributed to the fact that most PHC centres belonging to the MoI are located inside military compounds, in which are placed military personnel's work premises and accommodation, which may explain why more MoI than MoH respondents walked to their PHC centres and used the car less to travel. Further, a chi-square test revealed some evidence ($X^2 = 10.5$, $p = 0.005$) to

suggest a statistical difference between the two sectors in terms of transportation mode to PHC centres.

Marital status

As shown in table 7.4, married respondents outnumbered single participants by two to one, in both sectors. The Chi square test revealed no evidence (X^2 1.6, p= 0.6) to suggest no statistical difference between the two sectors in terms of marital status.

Overall health status

Table 7.4 illustrates respondents' distribution according to their own estimation of their overall health status. About a third considered their overall health 'good' and nearly half 'very good'. Slightly more MoI respondents considered their health very good compared with MoH respondents (54.8% and 43.2%, respectively), and respondents who considered their overall health was poor were more apparent in the MoH than MoI sector (4.3% and 1.66%, respectively). In order to compare data from both sectors, cross-tabulation between overall health and sector was undertaken. The Chi square test showed the corresponding p-value was 0.001 and $X^2 = 18.9$, therefore, suggesting respondents from the two sectors statistically differed in their perceptions of their overall health status.

Long standing illness and disability

Table 7.4 shows more than three-quarters of study respondents indicated they had no long standing illness or disabilities compared to about a quarter who had. The Chi-square test result (X^2 0.00) and corresponding p value (0.9) indicated no statistical difference between the two sectors' respondents in this respect. Little can be drawn from this finding because the question asked respondents to simply answer 'yes' or no' as to whether they had a long-standing illness, without specifying the type of long standing illness or disability.

Registration length with PHC centres

Respondents' average registration period with primary care centres was 7 years (mean 7.8, SD 5.02). As table 7.4 shows, respondents who were registered with their PHCs for three years and more were the largest group of the sample (84.4%). In contrast, only 7.3% respondents had been registered with PHCs for less than a year. Table 7.4 illustrates that MoH respondents had a longer registration period with their PHCs than their counterparts from the MoI (55% and 44.3% respectively). This may be due to the transient nature of military life. This pattern is further supported when looking at the number of respondents who had been registered with PHC centres for less than a year: MoI respondents were almost twice as many as MoH respondents (9.4% and 5.5%, respectively). This finding confirms the results found in relation to accommodation status. A chi-square test (X^2 =13) and corresponding p value (0.004) suggested a statistical difference between MoH and MoI respondents in terms of registration period with their PHCs.

Table 7.4: Detailed comparison of MoI and MoH respondents classified by sociodemographic variables

	MOI (n=424)	MOH (n=442)	All (n=866)	Unadjusted for clustering	
Age group	N (%)	N (%)	N (%)	X^2	P value
18-24	120 (28.3)	113 (25.5)	233 (26.9)	6.03 DF (4)	0.19
25-34	139 (32.78)	152 (34.3)	291 (33.6)		
35-44	100 (23.58)	113 (25.5)	213 (24.6)		
45-54	38 (8.96)	49 (11)	87 (10)		
≤55	27 (6.37)	15 (3.3)	42 (4.8)		
Gender	N (%)	N (%)	N (%)		
Male	320 (75.47)	245 (55.4)	565 (65.2)	38.3 DF (1)	<0.001
Female	104 (24.53)	197 (44.5)	301 (34.7)		
Employment (military vs. civilian)	N (%)	N (%)	N (%)		
Military	258 (93.4)	18 (6.5)	267 (30.8)	321.28 DF (1)	<0.001
Civilian	166 (28.1)	424 (71.8)	590 (68.1)		
Employment: military	N (%)	N (%)	N (%)		
Private-Corporal	58 (22.48)	5 (27.7)	63 (22.8)	7.6 DF (8)	0.46
Sergeant-Major Sergeant	60 (23.26)	6 (33.3)	66 (23.9)		
Sergeant Major	11 (4.26)	2 (11.1)	13 (4.7)		
Lieutenant –Major	35 (13.57)	2 (11.1)	37 (13.4)		
Lieutenant Colonel- Colonel	14 (5.43)	1 (5.5)	15 (5.4)		
Brigadier General	14 (5.43)	0	14 (5)		
Major-General	8 (3.10)	0	8 (2.9)		
Lieutenant-General	0	0	0		
General	0	0	0		
Retired Military Personnel	4 (1.55)	1 (5.5)	5 (1.8)		
Military Cadet	54 (20.93)	1 (5.5)	55 (19.9)		

Table 7.4: (cont)

Employment-civilian	MOI (n=) N (%)	MOH (n=) N (%)	All (n=) N (%)	Unadjusted for clustering X^2	P value*
Governmental employee	42 (25.3)	117 (27.5)	159 (26.9)	15.2 DF (5)	0.009
Retired	4 (2.4)	20 (4.7)	24 (4)		
Private sector employee	7 (4.2)	49 (11.5)	56 (9.4)		
Housewife	50 (30.1)	86 (20.2)	136 (23)		
Student	27 (16.2)	79 (18.6)	106 (17.9)		
Unemployed	36 (21.9)	73 (17.2)	109 (18.4)		
Education	N (%)	N (%)	N (%)		
Illiterate	11 (2.6)	8 (1.8)	19 (2.2)	92.1 DF (7)	<0.001
Primary education	36 (8.5)	27 (6.2)	63 (7.3)		
Intermediate education	58 (13.7)	53 (12.2)	111 (12.9)		
Secondary education	172 (40.8)	136 (31.3)	308 (36)		
Below university education*	30 (7.1)	68 (15.6)	98 (11.4)		
Bachelor from military establishment	46 (10.9)	3 (0.6)	49 (5.7)		
University degree	50 (11.8)	126 (29)	176 (20.5)		
Postgraduate degree	18 (4.2)	13 (3)	31 (3.6)		
Nationality	N (%)	N (%)	N (%)		
Saudi	413 (97.4)	404 (91.4)	817 (94.3)	14.6 DF (1)	< 0.001
Non- Saudi	11 (2.5)	38 (8.6)	49 (5.6)		
Marital status	N (%)	N (%)	N (%)		
Married	265 (62.5)	289 (65.5)	554 (64.0)	1.6 DF (3)	0.65
Single	148 (34.9)	138 (31.2)	286 (33)		
Divorced	8 (1.8)	9 (2.0)	17(1.9)		
Widowed	3 (0.7)	5 (1.1)	8 (0.9)		

* Diploma/vocational training

Table 7.4: (cont)

	MOI (n=)	MOH (n=)	All (n=)	Unadjusted for clustering	
Accommodation	N (%)	N (%)	N (%)	X^2	P value*
Owner-occupier	175(41.4)	274 (62.1)	449 (52.0)	52.7 DF (3)	0.001
Rented from employer	159 (37.6)	132 (29.9)	291 (33.7)		
Rented from private landlord	73 (17.3)	21 (4.7)	94 (10.8)		
Other arrangement	15 (3.5)	14 (3.1)	29 (3.3)		
Transport to PHC	N (%)	N (%)	N (%)		
Walk	52 (13.1)	34 (7.8)	86 (10.3)	10.5 DF (2)	0.005
Public transport (bus, etc.)	38 (9.6)	27 (6.2)	65 (7.8)		
Private transport (car, etc.)	306 (77.2)	373 (85.9)	679 (81.8)		
Registration with PHC	N (%)	N (%)	N (%)		
Less than one year	36 (9.4)	23 (5.5)	59 (7.3)	13 DF (3)	0.004
1-2 years	40 (10.4)	27 (6.4)	67 (8.3)		
3-6 years	138 (35.9)	139 (33.1)	277(34.5)		
7 years and more	170 (44.3)	231 (55)	401 (49.9)		
Respondents' overall health status	N (%)	N (%)	N (%)		
Very poor	0	1 (0.2)	1 (01)	18.3 DF (3)	<0.001
Poor	7 (1.66)	19 (4.3)	26 (3.0)		
Fair	49 (11.6)	80 (18.3)	129 (15.0)		
Good	134 (31.8)	148 (33.8)	282(32.8)		
Very good	231 (54.8)	189(43.2)	420 (48.9)		
Long standing illness and disability	N (%)	N (%)	N (%)		
Yes	102 (24.1)	105 (24.0)	207 (24.1)	0.0 DF (1)	0.97
No	320 (75.8)	331 (75.9)	651 (75.8)		

Number of visits to the general practitioner

In question (2) of the patient questionnaire, participants were asked to identify how many times in the past 12 months they had seen a doctor in their PHC centre. Table 7.5 shows that 93.3% of respondents had seen a doctor in their PHC centre in the past 12 months at least once. In contrast, 6.71% of respondents had not visited their PHCs during the last 12 months. Closer examination of table 7.5 reveals MoH respondents had visited a doctor in their PHC more often than MoI respondents in the past 12 months. This finding suggests MoH respondents are likely to develop a longer relationship with their centres and hence their doctors. The Chi-square test provided evidence (X^2 =11.5, p value: 0.02) to indicate a statistical difference between MoH and MoI respondents in terms of the number of visits to PHC centres during the last 12 months.

Table 7.5: Number of visits to the GP in the last 12 months

Number of visits per year	Sectors		Total	X^2	P value
	MoI (n %)	MoH (n %)	N (%)		
None	38 (9%)	20 (4.5%)	58 (6.7%)		
Once or twice	76 (18%)	64 (14.4%)	140 (16.2%)		
Three or four times	108 (25.6%)	116 (26.2%)	224 (25.9%)	11.5 DF (4)	P=0.02
Five or six times	77 (18.2%)	105 (23.7%)	182 (21%)		
Seven times or more	123 (29.5%)	137 (31%)	260 (30.1%)		
Total	422 (100%)	442 (100%)	864 (100.0%)		

Summary of stage (1)

Stage one described twelve socio-demographic characteristics of study respondents from both MoI and MoH sectors. With a few exceptions, the sample's sociodemographic characteristics were evenly distributed across MoI and MoH sectors. However, a salient variation between the two sectors was the distribution of men and women respondents. Male respondents were more numerous than female respondents in the MoI. Other demographic variables, such as military employment, level of education, nationality, accommodation,

and transport to the PHC, overall health status, long-standing illness, and length of registration at PHC centre were found to differ between sectors.

It is likely that some of the differences between respondents in the MoI and MoH sectors were related to military employment. For example, due to the transient nature of the military lifestyle, military personnel registered with and visited their PHC less than their MoH counterparts. However, MoI respondents had better overall health and fewer long-standing illnesses, perhaps because of the compulsory fitness training practised in the military.

7.4. STAGE (2): MOH & MOI PATIENTS' VIEWS ON THE QUALITY OF PHC SERVICES

This section provides an account of MoI and MoH respondents' evaluation of fourteen quality attributes. As discussed in chapter 5, section 5.7.13, all GPAS scales were calculated by aggregating items under each scale and scores were presented in percentage format, ranging from zero (minimum possible score) which denotes maximum dissatisfaction, to 100 (maximum possible score), which represents maximum satisfaction (**see appendix D for mathematical equation and an example of how the scales are calculated**). All tests under this section were carried out using a t-test (summary measures model to adjust for clustering effects).

Table 7.6 demonstrates that, without exception, MoI respondents evaluated the quality of all the extended GPAS scales higher than their counterparts from MoH. Table 7.6 shows that, for every single quality scale, the MoI results were higher than those from MoH, but the table also shows that the corresponding confidence intervals were wide , and contain zero value. Moreover, the corresponding p-values for the scales were high, suggesting that there is no statistical difference between the two sectors' respondents' views on quality judged on all 14 GPAS scales. There does indeed appear to be a general tendency to greater satisfaction with the MoI than the MoH , (particularly for

scales such as doctor's knowledge of patient , in which MoI was higher by 7.9%), community participation (MoI higher by 8%), and overall satisfaction (MoI was higher by 9.9%). Nevertheless, owing to the limited number of sites, and clustering effects, which resulted in wide confidence intervals and bigger p-values, the evidence is insufficient to make firm conclusions about this disparity between the two sectors.

Table 7.6: The extended GPAS scales' results for both MoI & MoH, adjusted for clustering effects

Quality Scales	MoI/ PHCs			MoH/ PHCs			Difference			Crude
	Obs	Mean (95% CI)	SDT	Obs	Mean (95% CI)	SDT	Obs	Mean (95% CI)	SDT	P-value
Access	422	69.3 (55.6,82.9)	5.3	438	65.2 (63.3,67.1)	0.7	860	4.1 (-7.8,16)	5.3	0.4618
Receptionists' care	423	71.1 (58.2,83.9)	5	442	70.3 (65.8,74.7)	1.7	865	0.8 (-10.9,12.6)	5.3	0.8766
Continuity of care	400	66.9 (52.3,81.4)	5.6	428	63.3 (60.6,65.9)	1	828	3.6 (-9.1,16.4)	5.7	0.5409
Communication	408	69.1 (63.6,74.6)	2.1	432	65.3 (63.4,67.1)	0.7	840	3.8 (-1.2,8.9)	2.2	0.1211
Interpersonal care	408	66.7 (55.1,78.2)	4.4	432	60.6 (58.5,62.8)	0.8	840	6.1 (-4.1,16.2)	4.5	0.2142
Doctor's know.	406	64.1 (51.3,76.7)	4.9	427	56.2 (53.6,58.7)	0.9	833	7.9 (-3.3,19)	5	0.1483
Enablement	381	64.1 (53.7,74.4)	4	409	60.9 (55.3,66.4)	2.1	790	3.3 (-6.9,13.3)	4.5	0.4996
Referral	278	80.7 (65.2,96.2)	6	223	75.6 (59.6,91.5)	6.2	501	5.1 (-14.1,24.3)	8.6	0.5661
Nursing care	312	64.1 (51.8,76.4)	4.7	303	63.2 (59,67.4)	1.6	615	0.9 (-10.3,12.1)	5	0.8644
Cultural &religious issues	424	73.1 (63.2,82.9)	3.8	442	71.7 (69.9,73.5)	0.7	866	1.4 (-7.2,10)	3.8	0.7302
Psychological issues	321	67.9 (55.7,80)	4.7	300	62.5 (58,66.9)	1.7	621	5.4 (-5.8,16.5)	5	0.3096
Community Participation	424	54.1 (35.5,72.5)	7.1	437	46.1 (42.6,49.4)	1.3	861	8 (-8.3,24.2)	7.3	0.3011
Organisation of services	424	65.2 (51.9,78.4)	5.1	442	58.1 (53.3,62.8)	1.8	866	7 .1(-5,19.2)	5.4	0.2237
Overall satisfaction	424	69.1 (54.1,83.9)	5.8	441	59.2 (56.2,62.1)	1.1	865	9.9 (-3.3,23)	5.9	0.1257

*SDT: Standard Deviation

7.5. MOI AND MOH PATIENTS' VIEWS ON THE QUALITY OF PHC SERVICES (RESULTS FOR INDIVIDUAL PHC CENTRES)

In order to identify variation of quality between individual PHC centres, mean scores were calculated for each quality scale per PHC centre. Table 7.7 presents GPAS scales' results for individual PHC centres in comparison to overall MoI and MoH scores and UK benchmark figures. It is important to note that the GPAS manual indicates that all scores range from 0-100 points, and a score which differs by 10 points or more (-/+) from the local average (here either MoI or MoH) is considered *unusually* low or high. A score of (-/+) 15 points away from the local average is considered exceptionally high or low.[308]

Table 7.7 shows the PHC centres standing out as having high/low scale scores.

Table 7.7: GPAS scales' results for individual PHC centres

Quality scales		Access	Receptionist care	Continuity of care	Communication	Interpersonal care	Doctor's knowledge of patient	Enablement	Referral	Nursing care	Cultural & religious	Organisational issues	Psychological issues	Community participation	Overall satisfaction
	UK benchmark*	**65.5**	**77.8**	**69.2**	**77.3**	**73.2**	**65.6**	**64.7**	**90.5**	**76.7**	N/A	N/A	N/A	N/A	**80.7**
MoI PHCs	Border HQ	60.3	65.1	57.6	64.0	**57.2**	**51.3**	57.1	**69.4**	62.9	67.8	**51.2**	60.2	34.6	**52.6**
	Border Institute	61.6	68.9	57.1	65.9	59.9	60.8	58.8	**60.0**	**59.0**	70.0	65.8	64.6	56.4	66.9
	Special Forces	71.0	**64.8**	72.2	72.6	67.3	65.3	72.7	93.9	**60.6**	71.7	57.3	66.6	49.7	**64.3**
	King Fahad Academy	**89.3**	**89.2**	**88.2**	75.3	86.7	**86.2**	55.8	98.4	85.6	87.3	87.7	89.3	86.9	91.5
	Training City	78.9	82.2	74.7	73.6	70.1	64.8	**80.0**	**76.6**	**66.1**	80.6	68.3	70.0	48.9	79.7
	Security Forces Hospital	**54.8**	**56.2**	**51.7**	**63.4**	**59.0**	55.9	60.0	86.0	**50.5**	61.2	60.7	56.4	47.8	**59.3**
	MoI total scores	**69.3**	**71.1**	**66.9**	**69.1**	**66.7**	**64.1**	**64.1**	**80.7**	**64.1**	**73.1**	**65.2**	**67.9**	**54.1**	**69.1**
MoH PHCs	Al Mursalat	62.8	71.3	61.4	**66.6**	**60.8**	58.1	65.2	**78.4**	68.2	72.4	56.3	62.3	48.6	**59.6**
	Salah al-diean	65.7	75.9	65.9	**64.8**	**63.1**	58.6	67.3	**70.9**	61.7	71.1	62.4	67.0	48.2	**59.1**
	Al-Aulia	63.8	71.5	65.2	**63.8**	**59.4**	56.7	55.7	95.0	64.7	73.7	62.3	61.0	49.4	**58.7**
	King Fahad's	67.1	72.2	65.4	67.9	**63.1**	57.0	62.9	**57.1**	**60.7**	72.2	55.1	66.2	45.8	**54.6**
	Al-Rabuah	67.4	64.3	61.7	65.6	**58.7**	**52.4**	60.2	**61.8**	66.5	72.3	51.3	55.2	41.5	**63.5**
	Al-mhamadia	64.5	66.3	60.0	63.1	**58.7**	**54.2**	**53.8**	90.3	**57.6**	68.6	61.1	63.0	43.0	**59.6**
	MoH total scores	**65.2**	**70.3**	**63.3**	**65.3**	**60.6**	**56.2**	**60.9**	**75.6**	**63.2**	**71.7**	**58.1**	**62.5**	**46.1**	**59.2**

Results in bold and yellow= exceptionally high satisfaction (more than 15% above the UK benchmark)

Results in bold and light green = high satisfaction (more than 10% above the UK benchmark)

Results in bold and grey = low satisfaction (more than 10% below the UK benchmark)

Results in bold and red = exceptionally low satisfaction (more than 15% below the UK benchmark)

Summary of section one of stage (2)

This section has presented the final mean scores for all fourteen extended GPAS scales for both MoI and MoH sectors (as aggregated and individual PHCs). Respondents' scores for each scale reveal how the quality of PHC on the dimension measured by the scale. This fulfils the first objective of this study, since each aspect of service quality has been assessed as viewed by patients. It has also compared MoI respondents' scores on each scale with respondents from the MoH, thereby achieving the study's second objective: that of comparing quality of services between the two sectors, as viewed by their patients.

Although results show that final scores for all quality scales were higher among MoI respondents, mean differences between the two sectors' scores were not statistically significant for any of the fourteen scales. This might be the product of the small number of clusters included in this study.

7.6. SAUDI RESULTS COMPARED TO PUBLISHED U.K. GPAS BENCHMARK SCORES

Table 7.8: Saudi results compared to published UK GPAS benchmark scores

Quality Scales	MoI & MoH		UK*	
	Obs	Mean (95% CI)	Obs	Mean (95% CI)
Access	860	67.3 (61.5,73.1)	15774	65.5 (65.2,65.8)
Receptionists' care	865	70.7 (65.1,76.3)	16074	77.8 (77.5,78.1)
Continuity of care	828	65.1 (58.9,71.2)	14538	69.2 (68.8,69.6)
Communication	840	67.2 (64.5,69.9)	14927	77.3 (77.0,77.6)
Interpersonal care	840	63.7 (58.5,68.9)	14758	73.2 (72.9,73.5)
Doctor's knowledge of patient	833	60.1 (54.2,66.0)	14258	65.6 (65.2,66.0)
Enablement	790	62.5 (57.6,67.4)	5673	64.7 (63.8,65.6)
Referral	470	78.2 (68.9,87.4)	2807	90.5 (89.4,91.6)
Nursing care	615	63.7 (58.4,69.0)	9229	76.7 (76.3,77.1)
Cultural and religious issues	866	72.4 (68.3,76.5)		N/A
Psychological issues	621	65.2 (59.6,70.7)		N/A
Community Participation	861	50.1 (41.9,58.2)		N/A
Organisation of services	866	61.6 (55.4,67.8)		N/A
Overall satisfaction	865	64.1 (57.1,71.1)	15298	80.7 (80.4,81.0)

**Source: GPAS Website.*[338]

This section presents the extended GPAS final scores for each quality scale. It also presents a comparison between published UK GPAS benchmark scores and those derived from this study (table 7.8). However, two important points need to be stressed. First, the GPAS benchmark results are not automatically transferable to the Saudi Arabian PHC system. Although Saudi Arabia and the UK have very similar PHC systems in terms of structure (primary, secondary, and tertiary), and free provision of care at point of delivery, it is prudent to apply the UK benchmark scores to the Saudi Arabian context with some caution, because, as well as managerial and operational differences between the two countries, it is not possible to ignore powerful cultural, religious and political forces that not only shape health care systems but greatly influence peoples' perceptions and attitudes towards health care and its quality. However, because this is the first study to utilise the GPAS in the Saudi context and no other benchmark exists, GPAS benchmark results are used as 'early indicators' but not as a 'final-word'.

Second, it is important to account for the noticeably narrower confidence intervals in published UK GPAS scores compared to the present study findings.

The latter are adjusted for the effect of cluster, which results in a wider confidence interval; and also sample size is much smaller. Table 7.9 presents the level of clustering (rho: Intra-cluster correlation coefficient, ICC) for MoI and MoH sectors.

Table 7.9: Intra-cluster correlation coefficient

Quality Scales	ICC (rho)
Access	0.018
Receptionists' care	0.00
Continuity of care	0.010
Communication	0.018
Interpersonal care	0.036
Doctor's know.	0.059
Enablement	0.005
Referral	0.015
Nursing care	0.004
Cultural &religious	0.000
Psychological issues	0.028
Community Participation	0.039
Organisation of services	0.041
Overall satisfaction	0.060

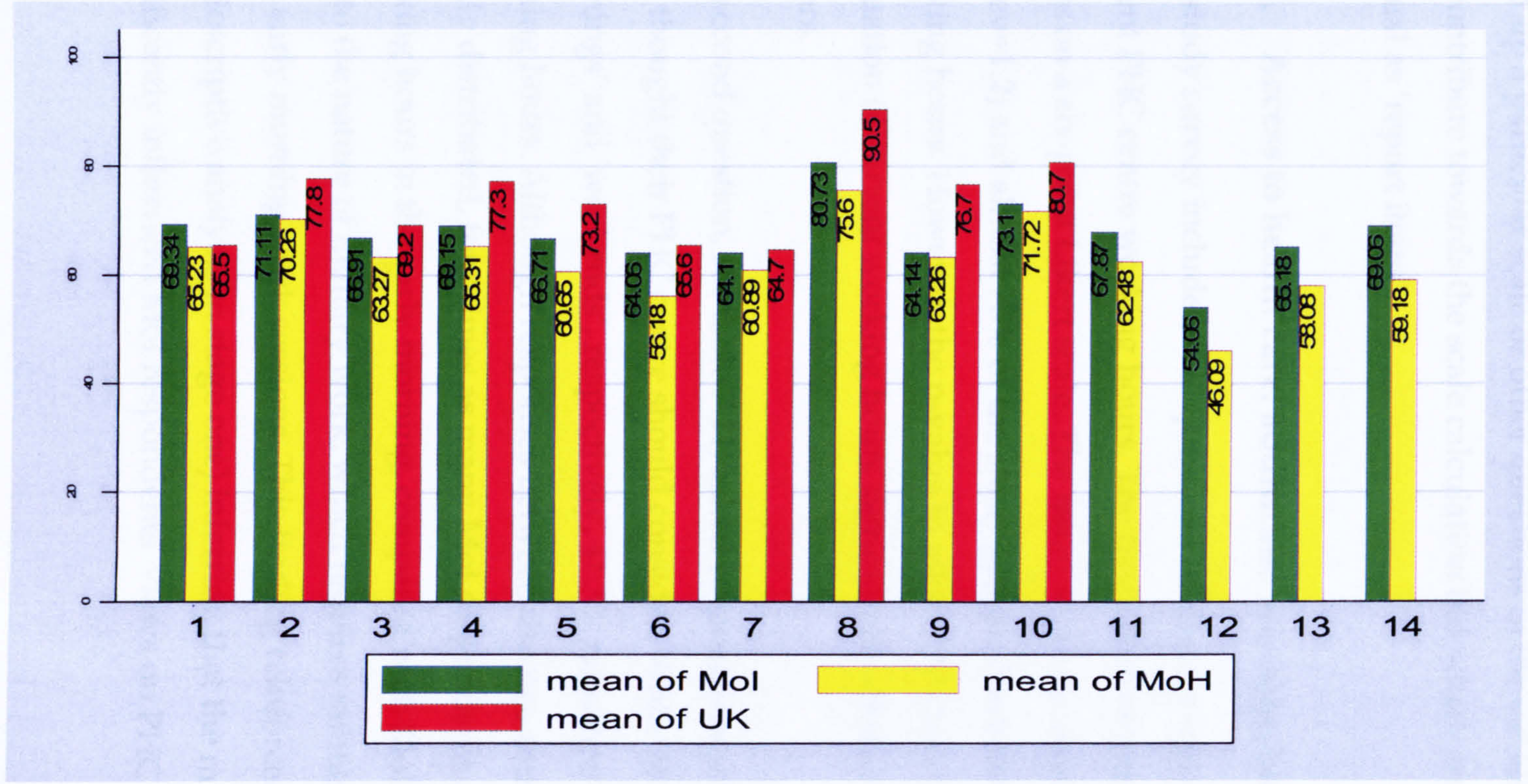
**95% confidence intervals are adjusted for clustering*

Figure 7.3 (bar chart), and table 7.8 compare the final scores for the two countries, for all quality scales for all sectors individually and combined. Table 7.8 also presents published scores for UK GPAS results. Examining scores from the two countries, it can be seen that the access scale is the only quality scale whose mean score is higher in Saudi Arabia than the UK. The mean score for access in Saudi Arabia was 67.3% (n=860) compared to 65.5% (n=15774) in the UK. The difference in mean scores was 1.8%. This suggests access to primary health care facilities is more of an issue to British patients than Saudi patients. However, table 7.8 indicates that for the remaining quality scales, Saudi patients were less satisfied with the quality of care than British patients. The level of dissatisfaction with quality scales varied from moderate dissatisfaction, as in the case of the enablement scale where the difference in means was 2.2%, to strong dissatisfaction, as in the case of referral to specialists, where the difference in

means was 12.3%. Although comparison between the GPAS benchmark and newly added scales is not applicable, community participation had a significantly lower score (50.1%), (n=861) than other quality scales, indicating that community participation is less satisfactory to Saudi patients than other scales.

Table 7.8 also shows that overall satisfaction was significantly lower in Saudi Arabia than in the UK. The mean score for overall satisfaction in Saudi Arabia was 64.1% (n=865), compared to 80.7% (n=15298) in the UK. The difference was 16.6 per cent, which suggests Saudi patients are markedly less satisfied than British patients.

Figure 7.3: MoI and MoH final GPAS scores compared to British GPAS benchmark scores



1-access, 2- receptionists care, 3- continuity of care, 4- communication, 5- interpersonal care, 6- doctor's knowledge of patient, 7- enablement, 8- referral, 9- nursing care, 10- cultural and religious issues, 11-psychological issues, 12- community participation, 13- organisational issues, 14- overall satisfaction

7.7. RESPONDENTS' ADDITIONAL EXPERIENCES

The previous section has presented respondents' evaluation of the quality of PHC services provided by both MoI and MoH sectors. Although the overall scores for each quality scale are of value, for further understanding it is equally important to look at respondents' responses to several individual questions that build up a particular scale or other questions in the GPAS questionnaire that do not contribute towards the scale calculation but which are identified in the GPAS manual as 'report items'.

7.7.1. Access to health care: additional working hours

The study survey included two questions to assess respondents' views on current PHC centre working hours. The first asked respondents to report their views on a six-point Likert scale. The mean score for working hours was 4.5 (st.dev=1.2) and almost 75% of the study sample were satisfied with current working hours. However, the p-value in table 7.10 shows respondents' evaluation of current working hours significantly differed between the two sectors.

The second question, see table 7.11, asked respondents what additional hours they thought their PHC centre should consider. While 26% and 21.9% suggested 'evenings' and 'weekends', respectively, 41.3% remained satisfied with current opening hours. Although responses between the two sectors were generally evenly distributed, four times as many MoI respondents preferred additional working hours in the early morning, compared with MoH respondents, possibly due to the nature of military work, which requires military personnel to attend very early morning work sessions. This finding reinforced previous findings (in the descriptive analysis in stage one) inferring that the military lifestyle significantly influenced MoI respondents' views on PHC services.

Table 7.10: MoI and MoH respondents' views on PHCs' current working hours

	MoI	MoH	Total	X^2	P-value
	n (%)	n (%)	n (%)		
Very poor	15 (3.5)	7 (1.6)	22 (2.5)		
Poor	10 (2.3)	24 (5.4)	34 (3.9)		
Fair	49 (11.5)	44 (10)	93 (10)	18.5 (5)	0.002
Good	119 (28.1)	134 (30.5)	253 (29.3)	DF	
Very good	118 (27.9)	149 (34)	267 (31)		
Excellent	112 (26.4)	80 (18.2)	192 (22.3)		
Total	423 (100)	438 (100)	861 (100)		

Table 7.11: what additional opening hours should your PHC consider ?

	Sectors		Yes (n %)	No (n %)
Early mornings	MoI	47	59 (6.8%)	807 (93.2%)
	MoH	12		
Lunchtimes	MoI	19	54 (6.2%)	812 (93.8%)
	MoH	35		
Evenings	MoI	114	225 (26.0%)	641 (74.0%)
	MoH	111		
Weekends	MoI	80	190 (21.9%)	676 (78.1%)
	MoH	110		
None, I am satisfied	MoI	174	358 (41.3%)	508 (58.7%)
	MoH	184		

7.7.2. Access to health care: appointment with a *particular* GP

Table 7.12 shows the majority of MoI and MoH respondents (82%) indicated they usually obtained an appointment with their own or a particular doctor on the same day. However, 18% reported this took them more than one day. A Chi-square test (table 7.12) provides some evidence (p-value= 0.03) to suggest a significant difference between the two sectors. MoH patients were more likely to be able to access a particular doctor on the same day than MoI patients.

Table 7.12: showing how long MoI & MoH respondents had to wait to be seen by their doctor

How long do you have to wait to access your doctor?	MoI	MoH	Total	X^2	P-value
	n (%)	n (%)	n (%)		
Same day	304 (80)	332 (83.8)	636 (81.9)		
Next day	39 (10.2)	42 (10.6)	81 (10.4)	10.4	
2-3 days	15 (3.9)	11 (2.7)	26 (3.3)	(4) DF	0.033
4 -5 days	2 (0.5)	5 (1.2)	7 (0.9)		
More than 5 days	20 (5.2)	6 (1.5)	26 (3.3)		
Total	380 (100)	396 (100)	776 (100)		

The second part of this question asked patients to rate the speed of access to a particular doctor. As can be seen from table 7.13, in both MoI and MoH sectors, Fisher's Exact test[a] with a low p-value indicates that the longer people had to wait the less likely they were to be satisfied.

---

a As advised by Munro[339] and many other statisticians,[278,337] the X^2 test is not appropriate in this analysis since there are large numbers of cells with few counts. Please see commentary under each table for exact number of cells with counts less than 5.

Table 7.13: MoI and MoH respondents' rating of the speed of access to see a particular doctor

		Very poor	Poor	Fair	Good	Very good	Excellent	Total	Fisher's Exact (2-sided)	P value
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)		
MoI	Same day	1(0.3)	2(0.7)	30(9.9)	63 (20.7)	90 (29.6)	118 (38.8)	304 (100)	148.5*	<0.001
	Next day	1(2.6)	8(21.1)	9(23.7)	14 (36.8)	5 (13.2)	1 (2.6)	38 (100)		
	2-3 days	0(0)	5(33.3)	4(26.7)	3.0 (20.0)	2 (13.3)	1 (6.7)	15 (100)		
	4 -5 days	0(0)	2(100)	0(0.0)	0 (0)	0 (0)	0 (0)	2 (100)		
	More than 5 days	7(35)	5(25.0)	4(20.0)	3 (15.0)	1 (5.0)	0 (0)	20 (100)		
	Total	9(2.4)	22(5.8)	47(12.4)	83 (21.9)	98 (25.9)	120 (31.7)	379 (100)		
MoH	Same day	1(0.3)	4(1.2)	31(9.4)	101 (30.5)	123 (37.2)	71 (21.5)	331 (100)	55.1**	<0.001
	Next day	0(0)	2(4.8)	9(21.4)	17 (40.5)	10 (23.8)	4 (9.5)	42 (100)		
	2-3 days	0(0)	0 (0.0)	8(72.7)	2 (18.2)	1 (9.1)	0 (0)	11 (100)		
	4 -5 days	0(0)	1 (20.0)	1(20.0)	2 (40.0)	1 (20.0)	0 (0)	5 (100)		
	More than 5 days	0(0)	1(16.7)	1(16.7)	1 (16.7)	3 (50.0)	0 (0)	6 (100)		
	Total	1 (0.3)	8 (2.0)	50(12.7)	123 (31.1)	138 (34.9)	75 (19)	395 (100)		

** The X^2 is not appropriate in this analysis since 63.3% of the cells (19 cells) have expected counts less than 5. The minimum expected count is .05.*

*** The X^2 is not appropriate in this analysis since 70.0% of the cells (21 cells) have expected counts less than 5. The minimum expected count is .01.*

***The total on this question (same day category) is slightly less in table 7.13 than in table 7.12 because of missing answers to the question about rating*

7.7.3. Access to health care: appointment with *any* GP

Respondents were asked to rate their satisfaction with the speed of access to any doctor in their PHC. As table 7.14 illustrates, respondents' responses were similar to those for the previous question. The majority of MoI and MoH respondents (81.7% and 86.5%, respectively) were able to access any doctor on the same day, and thus were generally satisfied with this aspect. However, just under a fifth of respondents (15.8%) in both sectors indicated they had to wait more than one day to see any doctor, which increased their negative attitude towards this variable. The chi-square test result suggested that speed of access to any doctor was significantly higher among MoH than MoI respondents, supporting previous results (see table 7.15).

Table 7.14: showing how long MoI & MoH respondents had to wait to be seen by any doctor

How long do you have to wait to access any doctor?	MoI	MoH	Total	χ^2	P-value
	n (%)	n (%)	n (%)		
Same day	322 (81.7)	360 (86.5)	682 (84.2)	15.2	0.004
Next day	39 (9.9)	30 (7.2)	69 (8.5)	(4) DF	
2-3 days	15 (3.5)	13 (3.1)	27 (3.3)		
4 -5 days	2 (0.5)	9 (2.1)	11 (1.3)		
More than 5 days	17 (4.3)	4 (0.9)	21 (2.5)		
Total	394 (100)	416 (100)	810 (100)		

Table 7.15 presents data for respondents' rating of their satisfaction with speed of access to any doctor in their centre. Similar to results found in table 7.13, table 7.14 shows that in both MoI and MoH sectors few respondents were happy having to wait until the next day to access a doctor in the PHC. The low p-value for the Fisher's Exact test indicates that the level of dissatisfaction is increased by the length of waiting to access any doctor in the centre.

Table 7.15: How long MoI & MoH respondents had to wait to be seen by any doctor and their rating of this

		Very poor	Poor	Fair	Good	Very good	Excellent	Total	Fisher's Exact (2-sided)	P value
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)			
MoI	Same day	2 (0.6)	3 (0.9)	36 (11.2)	63 (19.6)	93 (28.9)	125 (38.8)	322 (100)	149.1*	<0.001
	Next day	1 (2.6)	4 (10.3)	19 (48.7)	8 (20.5)	6 (15.4)	1 (2.6)	39 (100)		
	2-3 days	0 (0)	4 (28.6)	3 (21.4)	7 (50)	0 (0)	0 (0)	14 (100)		
	4-5 days	0 (0)	0 (0)	1 (50.0)	1 (50.0)	0 (0)	0 (0)	2 (100)		
	More than 5 days	4 (23.5)	8 (47.1)	3 (17.6)	2 (11.8)	0 (0)	0 (0)	17 (100)		
	Total	7 (1.8)	19 (4.8)	62 (15.7)	81 (20.6)	99 (25.1)	126 (32)	394(100)		
MoH	Same day	1 (0.3)	1 (0.3)	35 (9.7)	102 (28.3)	151 (41.9)	70 (19.4)	360 (100)	69.7**	<0.001
	Next day	1 (3.3)	2 (6.7)	9 (30)	9 (30.0)	7 (23.3)	2 (6.7)	30 (100)		
	2-3 days	1 (7.7)	1 (7.7)	5 (38.5)	4 (30.8)	2 (15.4)	0 (0)	13 (100)		
	4-5 days	1 (11.1)	2 (22.2)	2 (22.2)	4 (44.4)	0 (0)	0 (0)	9 (100)		
	More than 5 days	0 (0)	0 (0)	0 (0)	2 (50)	2 (50)	0 (0)	4 (100)		
	Total	4 (1.0)	6 (1.4)	51 (12.3)	121 (29.1)	162 (38.9)	72 (17.3)	416 (100)		

**19 cells (63.3%) have expected counts less than 5. The minimum expected count is .04.*

***21 cells (70.0%) have expected counts less than 5. The minimum expected count is .04.*

7.7.4. Access to health care: waiting times in the PHC centre for consultation

Table 7.16: MoI & MoH respondents' report of waiting times at PHC centres

	MoI	MoH	Total	χ^2	P value
	n (%)	n (%)	n (%)	31.4	<0.001
Not at all, they begin on time	63 (15.14)	31 (7.1)	94 (11.02)	(6) DF	
Less than 5 minutes	75 (18.03)	65 (14.9)	140 (16.41)		
6-10 minutes	94 (22.60)	122 (27.9)	216 (25.32)		
11-20 minutes	74 (17.79)	57 (13.0)	131 (15.36)		
21-30 minutes	57 (13.70)	80 (18.3)	137 (16.06)		
31-45 minutes	25 (6.01)	54 (12.4)	79 (9.26)		
More than 45 minutes	28 (6.73)	28 (6.4)	56 (6.57)		
Total	416 (100)	437 (100)	853(100)		

Table 7.17 presents a sample distribution based on waiting times for consultation. It shows that, among MoI respondents, 15.1% were able to enter immediately. In contrast, 6.7% reported that it took more than 45 minutes before they were seen by a doctor.

The median waiting time for MoI respondents before being asked to enter doctors' clinics time was 6-10 minutes. In contrast, for MoH respondents, the median waiting time was from 11-20 minutes. These differences may be related to the fact that MoH PHC centres serve a larger population than MoI ones, and hence more people are likely to attend PHC centres than MoI centres.

Table 7.18 indicates that some respondents considered having to wait between 6-10 minutes unacceptable, and their negative attitude increased as the waiting time increased. MoH respondents' responses similarly imply that long waiting times reduced their satisfaction. Among MoI respondents, only 6.8% reported being able to enter a doctor's clinic immediately, and 6.42% reported they had to wait between 31-45 minutes.

MoH respondents revealed a gradual increase in dissatisfaction as waiting times lengthened. Interestingly, unlike MoI respondents, who expressed a negative attitude if kept waiting for 6 minutes, MoH respondents displayed a negative

attitude if there was any waiting at all; they wanted to be able to access a doctor instantaneously. Fisher's Exact test indicated a strong association (p-values <0.001) between waiting time and respondents' satisfaction in both sectors.

Table 7.17: MoI & MoH respondents' views on waiting times at PHC centres

		Very poor	Poor	Fair	Good	Very good	Excellent	Total	Fisher's Exact (2-sided)	P value
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)		
MoI	Not at all, they begin on time	0 (0)	0 (0)	5 (7.9)	10 (15.9)	11 (17.5)	37 (58.7)	63 (100)	253.08*	<0.001
	Less than 5 minutes	0 (0)	0 (0)	2 (2.7)	8 (10.7)	25 (33.3)	40 (53.3)	75 (100)		
	6-10 minutes	1 (1.1)	5 (5.3)	15 (16.0)	21 (22.3)	34 (36.2)	18 (19.1)	94 (100)		
	11-20 minutes	1 (1.4)	7 (9.5)	19 (25.7)	20 (27)	21 (28.4)	6 (8.1)	74 (100)		
	21-30 minutes	2 (3.5)	8 (14)	18 (31.6)	20 (35.1)	8 (14.0)	1 (1.8)	57 (100)		
	31-45 minutes	3 (12.0)	13 (52)	5 (20.0)	2 (8)	0 (0)	2 (8.0)	25 (100)		
	More than 45 minutes	10 (35.7)	12 (42.9)	3 (10.7)	1 (3.6)	1 (3.6)	1 (3.6)	28 (100)		
	Total	17 (4.1)	45 (10.8)	67 (16.1)	82 (19.7)	100 (24)	105 (25.2)	416 (100)		
MoH	Not at all, they begin on time	1 (3.3)	0 (0)	1 (3.3)	2 (6.7)	7 (23.3)	19 (63.3)	30 (100)	285.32**	<0.001
	Less than 5 minutes	1 (1.5)	3 (4.6)	8 (12.3)	12 (18.5)	16 (24.6)	25 (38.5)	65 (100)		
	6-10 minutes	2 (1.6)	4 (3.3)	20 (16.4)	42 (34.4)	36 (29.5)	18 (14.8)	122 (100)		
	11-20 minutes	2 (3.5)	3 (5.3)	23 (40.4)	20 (35.1)	9 (15.8)	0 (0)	57 (100)		
	21-30 minutes	2 (2.5)	19 (23.8)	32 (40)	19 (23.8)	5 (6.3)	3 (3.8)	80 (100)		
	31-45 minutes	9 (16.7)	31 (57.4)	10 (18.5)	3 (5.6)	1 (1.9)	0 (0)	54 (100)		
	More than 45 minutes	8 (28.6)	13 (46.4)	5 (17.9)	1 (3.6)	1 (3.6)	0 (0)	28 (100)		
	Total	25 (5.7)	73 (16.7)	99 (22.7)	99 (22.7)	75(17.2)	65 (14.9)	436.0(100)		

**12 cells (28.6%) have expected counts less than 5. The minimum expected count is 1.02.*

***10 cells (23.8%) have expected counts less than 5. The minimum expected count is 1.61.*

7.7.5. Continuity of care

Table 7.18: Continuity of care: frequencies for meeting usual doctor

	MoI	MoH	Total
	n (%)	n (%)	n (%)
Never	9 (2.2)	11(2.5)	20 (2.4)
Almost never	17 (4.2)	13 (3.0)	30 (3.9)
Sometimes	127 (31.2)	112 (26)	239 (28.5)
A lot of the time	84 (20.6)	134 (31.1)	218 (26)
Almost always	46 (11.3)	111 (25.7)	157(18.7)
Always	123 (30.3)	50 (11.6)	173 (20.7)
Total	406 (100)	431 (100)	837 (100)

Table 7.19 shows that 30.3% of MoI respondents always saw their usual doctors compared to 2.2% who "never saw their usual doctor". Results from the same table imply that 62.2% of MoI respondents saw their usual doctor at least a lot of the time, compared to 37.6% who never or only sometimes saw their usual doctor. To gain more insight into the associations between this and respondents' satisfaction, table 7.20 presents MoI respondents' rating of their ability to access their usual doctor. The overall pattern which emerges from their rating is that generally those who always saw their usual doctor were more likely to report high satisfaction.

Table 7.19: In general, how often do you see your usual doctor (continuity of care)?

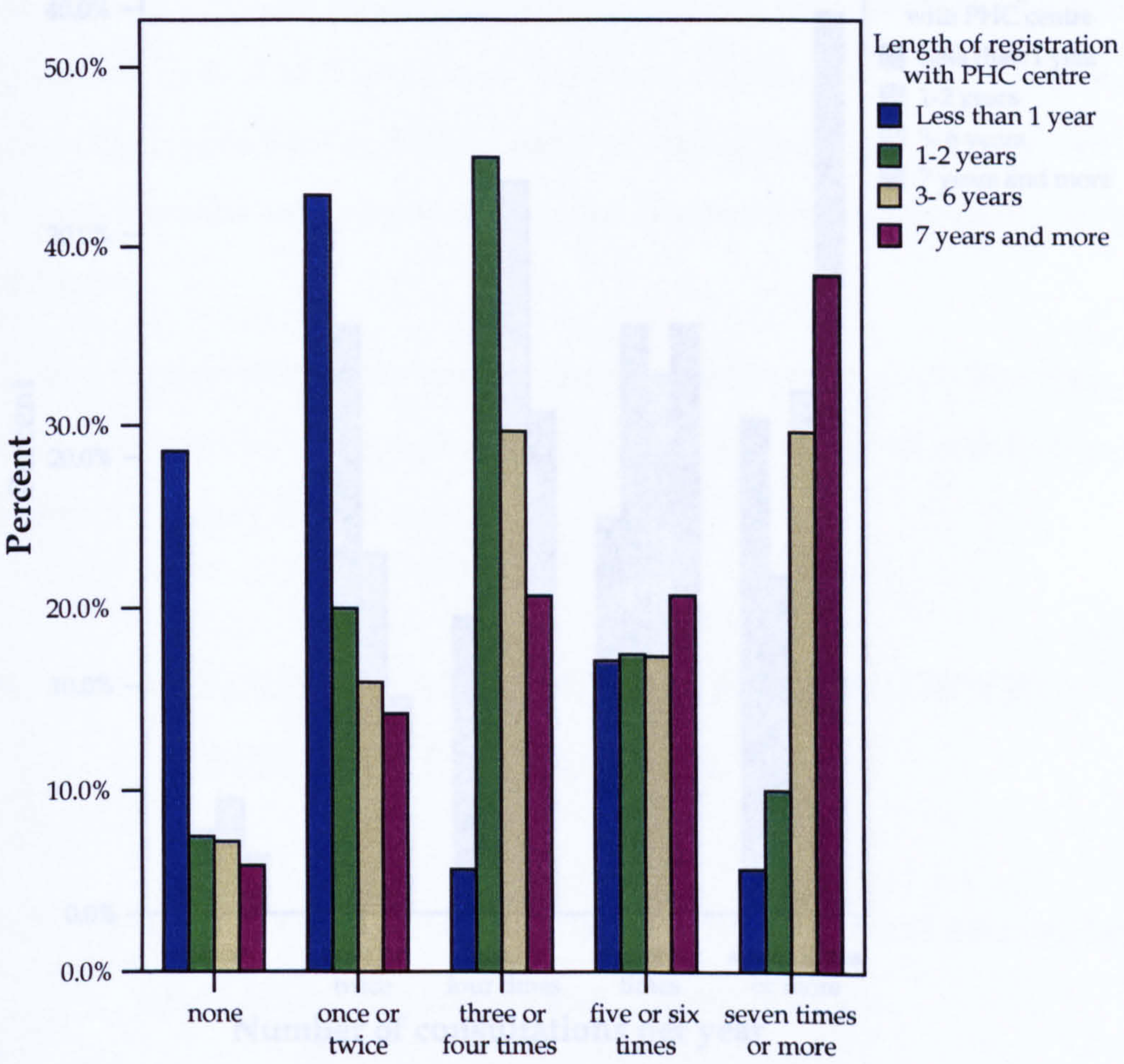
		Very poor	Poor	Fair	Good	Very good	Excellent	Total	Fisher's Exact (2-sided)	P value
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)		
MoI	Never	1 (11.1)	1 (11.1)	3 (33.3)	2 (22.2)	0 (0)	2 (22.2)	9 (100)	274.9*	<0.001
	Almost never	3 (18.8)	7 (43.8)	1 (6.3)	3 (18.8)	2 (12.5)	0 (0)	16 (100)		
	Sometimes	2 (1.6)	16 (12.8)	40 (32.0)	53 (42.4)	11 (8.8)	3 (2.4)	125 (100)		
	A lot of the time	0 (0)	1 (1.2)	20 (24.1)	34 (41.0)	18 (21.7)	10 (12.0)	83 (100)		
	Almost always	0 (0)	1 (2.3)	4 (9.3)	13 (30.2)	19 (44.2)	6 (14.0)	43 (100)		
	Always	1 (0.8)	0 (0)	2 (1.6)	11 (8.9)	24 (19.5)	85 (69.1)	123 (100)		
	Total	7 (1.8)	26 (6.5)	70 (17.5)	116 (29.1)	74 (18.5)	106 (26.6)	399 (100)		
MoH	Never	4 (36.4)	2 (18.2)	0 (0)	1 (9.1)	3 (27.3)	1 (9.1)	11 (100)	166.8*	<0.001
	Almost never	3 (23.1)	3 (23.1)	2 (15.4)	5 (38.5)	0 (0)	0 (0)	13 (100)		
	Sometimes	3 (2.7)	6 (5.4)	37 (33)	43 (38.4)	17 (15.2)	6 (5.4)	112 (100)		
	A lot of the time	1 (0.8)	1 (0.8)	30 (22.6)	66 (49.6)	27 (20.3)	8 (6)	133 (100)		
	Almost always	0 (0)	1 (0.9)	12 (10.9)	32 (29.1)	56 (50.9)	9 (8.2)	110 (100)		
	Always	0 (0)	0 (0)	0 (0)	12 (24.5)	14 (28.6)	23 (46.9)	49 (100)		
	Total	11 (2.6)	13 (3)	81 (18.9)	159 (37.1)	117 (27.3)	47 (11)	428 (100)		

**17 cells (47.2%) have expected counts less than 5. The minimum expected count is .16.*

***20 cells (55.6%) have expected counts less than 5. The minimum expected count is .28.*

To examine possible links between respondents' length of registration with the PHC and number of consultations with their usual doctor per year, figure 7.4 illustrates that MoI respondents' number of consultations per year seems to positively associate with length of registration.

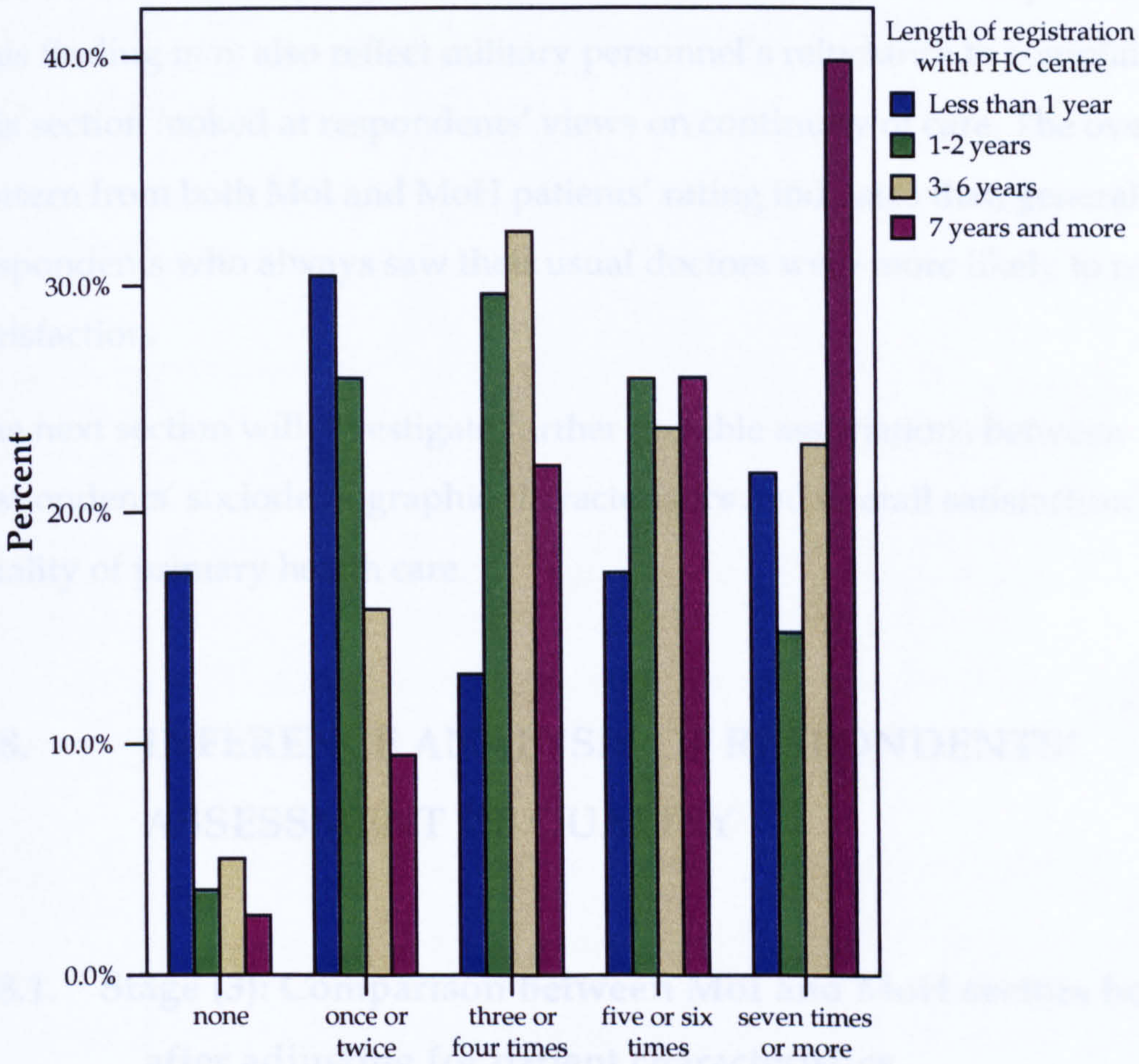
Figure 7.4 Number of consultations per patient in relation to length of registration: MoI respondents



In contrast, as table 7.19 illustrates, among MoH respondents, only 11.6% indicated they always saw their usual doctor. Further, 2.5% reported 'never' seeing their usual doctor. Table 7.20 shows results pointing to an emerging pattern suggesting that patients' dissatisfaction increased as a result of not being able to see their usual doctor. Moreover, MoH respondents appeared to value continuity of care more than MoI respondents, possibly due to frequent moving of military staff. Figure 7.5 shows that, as with MoI respondents, MoH

respondents' length of registration was associated with the number of consultations at the PHC centre; their number of consultations increased as length of registration increased.

Figure 7.5: Number of consultations per patient in relation to length of registration: MoH respondents



Summary

The third level of stage two looked at respondents' experience of specific aspects such as waiting time. Although questions were included within GPAS scales, it was interesting to examine responses to individual questions. The analysis of this section indicates that most respondents were happy about current working hours. Respondents' desire for additional working hours was influenced by their sector. For instance, MoI respondents were more likely to choose early morning

additional working hours than MoH, presumably because of the nature of military lifestyle (e.g. attending very early military sessions).

Analysis of this section shows MoH respondents were likely to access their usual doctor or any doctor faster than MoI respondents. MoH respondents appeared to have higher expectations than MoI respondents, as although they were able to access doctors faster, they were less satisfied with their current speed of access. This finding may also reflect military personnel's reluctance to complain. Finally, this section looked at respondents' views on continuity of care. The overall pattern from both MoI and MoH patients' rating indicates that, generally, those respondents who always saw their usual doctors were more likely to report high satisfaction.

The next section will investigate further possible associations between respondents' sociodemographic characteristics and overall satisfaction with the quality of primary health care.

7.8. INFERENCE ANALYSIS OF RESPONDENTS' ASSESSMENT OF QUALITY

7.8.1. Stage (3): Comparison between MoI and MoH sectors before and after adjusting for patient characteristics

Although the crude mean results suggest that MoI and MoH respondents held very similar views on quality on all quality scales, Table 7.21 shows that, after adjusting for respondents' socio-demographic variables, the difference between the two sectors was highly significant in three scales: communication, doctor's knowledge of patient, and overall satisfaction. This confirms what was found earlier in the descriptive analysis section, that socio-demographic characteristics significantly differed between the two sectors. After adjusting for sociodemographic variables, differences between respondents' mean scores for

three of the fourteen scales become statistically significant, again pointing to the influence of respondents' sociodemographic characteristics

Table 7.20: Comparison between MoI and MoH sectors after adjusting for patients' sociodemographic variables

Quality Scales		Crude		Adjusted*	
	n	Mean (95% CI)	P-value	Mean (95% CI)	P-value*
Access	746	4.1 (-7.8,16)	0.4618	-3.2 (-11.7,5.3)	0.459
Receptionists' care	750	0.8 (-10.9,12.6)	0.8766	-0.4 (-9.6, 8.7)	0.924
Continuity of care	724	3.6 (-9.1,16.4)	0.5409	-2.8 (-12.3, 6.6)	0.554
Communication	734	3.8 (-1.2,8.9)	0.1211	-5.8 (-9.5, -2.1)	0.002
Interpersonal care	734	6 (-4.1,16.2)	0.2142	-5.9 (-12.3, 0.4)	0.066
Doctor's know.	729	7.8 (-3.3,19)	0.1483	-8.6 (-16.8, -5.2)	0.037
Enablement	690	3.2 (-6.9,13.3)	0.4996	-7.2 (-14.8, 0.31)	0.060
Referral	408	5.1 (-14.1,24.3)	0.5661	-13.5 (-28.8, 1.8)	0.085
Nursing care	486	0.8 (-10.3,12.1)	0.8644	-0.63 (-9.8, 8.5)	0.891
Cultural &religious issues	750	1.3 (-7.2,10)	0.7302	-2.14 (-8.6, 4.4)	0.519
Psychological issues	540	5.3 (-5.8,16.5)	0.3096	-6.6 (-14.4, 1.2)	0.100
Community Participation	745	7.9 (-8.3,24.2)	0.3011	-4.4 (-17.1, 8.2)	0.494
Organisation of services	750	7 (-5,19.2)	0.2237	-7.0 (-16.2, 2.2)	0.141
Overall satisfaction	750	9.8 (-3.3,23)	0.1257	-9.3 (-18.3, -0.38)	0.041

**Adjusted for clustering and the following socio-demographic variables using random effects model (Sector, gender, age, overall health status, marital status, length of registration with PHC centre, educational level, accommodation status, chronic illness, employment status)*

7.8.2. Stage (4): Estimate of association between respondents' sociodemographic characteristics and their overall satisfaction

It is widely acknowledged that patients' sociodemographic characteristics (independent variables), such as age, gender, education, are related to both respondents' experience and how they interpret this experience.[335] For instance, educated patients are more likely to embark on a positive relationship with their doctors, as their knowledge enables them to participate in diagnosis and treatment procedures. Educated patients are also less likely to be satisfied with the quality of services, as their expectations are higher. Other sociodemographic variables known to be closely associated with how patients view health services include age, marital status, type of accommodation, and method of transport to the service. In this study, a variable indicating respondents' military rank was added because this study included a large number of military personnel. This

variable was deemed to be an important predictor of military respondents' views on the quality of service, similar to educational level. Further, a military respondent with a senior rank, such as Major or higher, was thought likely to embark on a positive relationship with his doctor. In addition, due to the respect accorded high-ranking officers and the military's strict hierarchical discipline, this group was thought more likely to be treated differently than respondents with lower ranks, and hence to be more satisfied with the quality of services provided.

In order to support these propositions with evidence, each sociodemographic variable's association with overall satisfaction with the quality of PHC was examined in two stages. First, univariate analysis was conducted to examine the association between a single predictor and the outcome variable (crude estimate). Second, a multivariate model was constructed to observe the change in the observed mean after adjusting for other predictor variables (independent variables). It is important to note that, for statistical reasons, some categories with too few members were combined with the closest group, because very few observations may cause regression analysis to produce an inaccurate estimate, because it fails to distinguish independent effects for small observations. For example, age groups were reduced from five categories to four because the last group (55 years and older) contained 27 and 15 observations from MoI and MoH sectors, respectively. The new group included this age group with those aged 45 and over.

7.8.3. Univariate analysis

In this section, respondents' sociodemographic characteristics, such as age, gender, employment status, etc. are examined to ascertain which ones influenced their overall satisfaction with primary health care. Usually, a t-test for binary variables and ANOVA one-way tests for categorical variables are applied to acquire the statistical results needed. However, as these tests were not applicable

because of the clustering effects, a univariate random effects regression test was utilised.

7.8.4. Age groups

The age variable is an important predictor in health care studies, as different age groups tend to view health care differently. In order to ascertain the association between different age groups and patients' overall satisfaction, a random effects regression test was applied and the results were as follows:

MoI respondents

As can be seen from Table 7.22[a], there seemed to be little association between MoI respondents' age group, and their overall satisfaction with health care services. Nevertheless, a trend can be inferred from the result in that respondents' satisfaction increased slightly as their age increased. For instance, respondents aged 25-34 had a mean score of 1.6, which means this age group differed by +1.6 from the baseline (constant) group (18-24). This trend applies to other age groups, although only to a very slight degree. The oldest age group were more satisfied than the baseline group by 3.8. However, this interpretation is not supported by sufficient evidence to be generalisable, as the corresponding p-value was 0.78 and confidence interval values included zero, which indicates the difference between age groups was not statistically significant. Generally, this finding corresponds with other studies reporting older patients tend to be more satisfied than younger patients.[335]

MoH respondents

Table 7.23 shows MoH respondents varied in their overall satisfaction according to age group. Although there is no clear trend to indicate whether younger or

---

[a] adjusted for clustering and the following independent variables are included in the regression model (age group, gender, education status, employment military, employment civilian, accommodation status, overall health, transport, marital status

older respondents were more satisfied, however, the middle age group (25-34) was least satisfied among MoH respondents with a score mean of -7.5. The corresponding p-value was 0.0322, which suggests an association between respondents' age group and overall satisfaction. A possible reason why the middle age-group was least satisfied overall may be related to the fact that members of this group are likely to be married, hence have children and therefore likely to be frequent visitors to the PHC centre. However, this explanation may not stand as the next age group (35-44) was shown to be more satisfied than this group and they too are likely to be married, have children, and be frequent visitors to the PHC centre.

7.8.5. Gender

MoI and MoH respondents

Tables 7.22 and 7.23 show MoI and MoH female respondents were more satisfied than male respondents. In the MoI sector, female respondents' mean score was slightly higher by 7.19 (95% CI 1, 13.3), and the corresponding p-value was 0.02, indicating a statistically significant difference. Similarly, in the MoH sector, female respondents' mean score was higher by 11.9 (95% CI 7, 16.5), with a p-value of <0.001, again indicating a highly significant difference.

7.8.6. Education

MoI respondents

Table 7.22 shows MoI respondents with different educational levels expressed different views on the overall quality of services. Grouped under three categories: 1-primary education or less; 2- intermediate-secondary education; and 3- some university education or higher, more highly-educated respondents achieved lower scores than less educated respondents, suggesting more highly-educated patients were less satisfied with the quality of health care. However, the corresponding p-value was 0.07, slightly higher than the cut-off 0.05 criterion,

providing little evidence to suggest that differences between educational groups were statistically significant.

MoH respondents

Table 7.23 shows that, among MoH respondents, there was an inverse correlation between levels of education and overall satisfaction. University educated respondents had a coefficient of -18.97 compared with a figure of -7.16 for respondents with primary education or less. The corresponding p-value was <0.001, suggesting differences between groups were statistically significant.

7.8.7. Military employees

MoI respondents

This variable refers to the military ranks of military personnel respondents in this study. Military ranks were grouped under five main categories: 1- Private- to Sergeant Major, 2- Lieutenant- to Colonel, 3- Brigadier- to Major General, 4- Retired military, 5- Military student /Cadets. As can be seen from table 7.19, although the p-value for differences between respondents' groups' views on overall satisfaction was 0.71, this provides no evidence of statistical differences. However, the mean score for all groups was negative when compared to the constant, except for the third category which included officer respondents ranked between Brigadier- and Major General.

7.8.8. Civilian employees

MoI respondents

MoI civilian respondents were grouped into six groups: governmental employees,[a] retired, private sector employees, housewives, students, and

---

[a] In Saudi Arabia, the government is the major employer (up to 75% of Saudi people are employed by the government) and it offers permanent jobs for teachers, civil servants, etc. Occupiers of these posts do not

unemployed. Table 7.22 shows that retired respondents were the most satisfied group, with a mean of 23 (95% CI 0.9, 45.1). In contrast, private sector employee respondents were the least satisfied, with a mean score of -12.6 (95% CI -30.5, 5.3). The p-value indicating the difference between different civilian employment categories was 0.048, providing some evidence to suggest that the difference between civilian employees' views on overall quality was statistically significant. However, further examination revealed no clear trend in respondents' overall satisfaction. Nevertheless, this section shows that retired respondents were more satisfied overall than other categories' members. This may be linked to the age factor, since older MoI respondents had shown a higher overall satisfaction than younger respondents (see table 7.22).

MoH respondents

MoH civilian employee respondents' views on overall satisfaction with PHC services significantly differed. The corresponding p value as can be seen from table 7.23 was 0.0001. Housewives were the most satisfied group and, in contrast to MoI respondents, retired employees were the least satisfied.

---

require an annual renewal of their contracts. The employee occupies his post until he retires at age 65 or relinquishes it for other reasons, such as illness or death.

Table 7.21: Univariate and multivariate regression analysis: association between MoI respondents' characteristics and their overall satisfaction.

MoI respondents' overall satisfaction	Adjusted for clustering effect using random effects model			
	Univariate analysis Co-efficient (CI 95%)	P-value	Adjusted for confounders Co-efficient (CI 95%)	P-value
Age groups				
18-24	1[a]	0.78	1	0.79
25-34	1.6 (-4.3,7.5)		1.7 (-4.5,8)	
35-44	1.6 (-4.9,8.2)		1.6 (-5.2,8.5)	
45+	3.8 (-3.5,11.2)		3.9 (-3.6,11.5)	
Gender				
Male	1	0.02	1	0.36
Female	7.1 (1, 13.3)		3.7 (-3, 10.4)	
Education				
Primary education or less	1	0.06	1	0.09
Intermediate-Second Education	-7.2 (-14.8,0.4)		-8.7 (-17, -0.3)	
Some University Edu. Or higher	-9.5 (-17.6, -1.5)		-9 (-17.8, -0.3)	
Employment- military				
Private- Sergeant major	1	0.71	1	0.52
Lieutenant- Colonel	-3.5 (-12.1,4.9)		-4.3 (-20.1,11.3)	
Brigadier- Major General	4.4 (-7.3,16.1)		7.8 (-10.2,26)	
Retired military	-9.5 (-34.8,15.7)		-5.5 (-32.7,21.6)	
Military student /Cadet	1.2 (-8.8,11.3)		-1.9 (-13.1,9.3)	
Employment-civilian				
Governmental employee	1	0.04	1	0.12
Retired	23 (0.9,45.1)		21.9 (0.3,43.4)	
Private sector employee	-12.6 (-30.5,5.3)		-16.5 (-35.8,2.7)	
Housewife	6.1 (-3.6,16)		-5.7 (-19.5,8)	
Student	9.7 (-1.2,20.7)		-2.8 (-17.6,12)	
Unemployed	4.8 (-4.9,14.7)		-5.5 (-18.1,7)	
Accommodation status				
Owner occupied	1	0.23	1	0.11
Rented accommodation	2.8 (-1.8, 7.5)		4.1 (-.9, 9.2)	
Overall health status				
Poor	1	0.0003	1	0.0015
Fair	4.6 (-13.9,23.2)		3.1 (-16.8,23.2)	
Good	15.3 (-2.5,33.1)		13.1 (-6.3,32.7)	
Very good	19.3 (1.6,37.1)		17.4 (-2,36.9)	

[a] Regression chooses a baseline to which other groups are to be compared. Usually this is the lowest coded value (coded value in dataset is zero) of the independent variable.[292] For instance, in the case of the first independent "age groups" the variable has four age groups coded as follows (0)18-24, (1)25-34, (2)35-44, (3)45+. The age group 18-24 is treated as the baseline , because it was coded zero and hence has the lowest code in the dataset. The baseline coefficient is usually set at value 1, and subsequent coefficients are regressed on the outcome variable and the coefficient appears as plus or minus from the baseline coefficients. For instance, the coefficient for the next age group (25-34) is 1.6, which means that if the mean satisfaction for the baseline group was 70%, the age group satisfaction is 70%+ 1.6 , which results in a final score of 71.6% for the second age group. This is of practical importance in identifying trends in the data , and also to determine which age group is more or less satisfied than the baseline , and to determine if the satisfaction/dissatisfaction is associated with increase of age.

Table 7.21: (cont)

Chronic or longstanding illness				
Yes	1	0.09	1	0.81
No	4.8 (-.87, 10.5)		.7 (-5.5, 7)	
Transport to PHC				
Public transport (bus etc)	1	0.71	1	0.36
Private transport (car, etc)	1.1 (-4.9, 7.1)		2.8 (-3.3, 8.9)	
Marital status				
Married	1	0.05	1	0.01
Not Married	5.2 (-.12, 10.5)		7.5 (1.7, 13.4)	

Table 7.22: Univariate and multivariate regression analysis: association between MoH respondents' characteristics and their overall satisfaction.

MoH respondents' overall satisfaction	Adjusted for clustering effect using random effects model			
	Univariate analysis Co-efficient (CI 95%)	P-value	Adjusted for confounders Co-efficient (CI 95%)	P-value
Age groups				
18-24	1	0.032	1	0.04
25-34	-7.5 (-14, -1.1)		-8.2 (-14.7, -1.6)	
35-44	0.7 (-6.2,7.6)		-0.5 (-7.4,6.3)	
45+	-0.1 (-8.3,7.9)		-1.9 (-10.1,6.1)	
Gender				
Male	1	<0.001	1	0.01
Female	11.9 (7, 16.8)		8.6 (1.4, 15.8)	
Education				
Primary education or less	1	<0.001	1	0.007
Intermediate-Second Education	-7.1 (-16.5,2.2)		-10.3 (-20.3, -0.4)	
Some University Edu. Or higher	-18.9 (-28.2, -9.6)		-16.6 (-27.3, -5.9)	
Employment-civilian				
Governmental employee	1	<0.001	1	0.123
Retired	-12.3 (-24.6, -0.1)		-14.3 (-28.3, -0.3)	
Private sector employee	-9.9 (-18.5, -1.3)		-9.6 (-18.2, -1.1)	
Housewife	10.7 (3.4,17.9)		-2.4 (-12.7,7.9)	
Student	9.2 (1.8,16.6)		0.1 (-9.7,9.9)	
Unemployed	4.1 (-3.3,11.7)		-4.9 (-13.9,4.1)	
Accommodation status				
Owner occupied	1	0.63	1	0.86
Rented accommodation	1.2 (-3.8, 6.3)		.47 (-4.9, 5.8)	
Overall health status				
Poor	1	0.68	1	0.65
Fair	-1.4 (-14.5,11.6)		1.3 (-12,14.8)	
Good	1 (-11.4,13.4)		5.5 (-7.5,18.6)	
Very good	-2.5 (-14.8,9.7)		3.2 (-9.9,16.5)	
Chronic or longstanding illness				
Yes	1	0.62	1	0.42
No	-1.4 (-7.3, 4.3)		-2.6 (-9.2, 3.9)	
Transport to PHC				
Public transport (bus etc)	1.00	0.01	1	0.03
Private transport (car, etc)	-8.90 (-16.04, -1.76)		-8.3 (-16.2, -.4)	
Marital status				
Married	1	0.52	1	0.52
Not Married	1.6 (-3.5, 6.9)		2.2 (-4.6, 9.1)	

* adjusted for clustering and the following independent variables are included in the regression model (age group, gender, education status, employment civilian, accommodation status, overall health, transport, marital status)

7.8.9. Overall health status

MoI and MoH respondents

Table 7.22 indicates that in the MoI sector, patients' satisfaction is 5 points higher among respondents with fair health compared with poor, and there is a general increase in overall satisfaction scores as people's health status improves. This assumption is supported by a p-value of 0.0003, which provides sufficient evidence to suggest significant differences between groups. This trend may be explained by the assumption that respondents with poor health status are frequent visitors, and therefore more likely to experience unsatisfactory events (longer waiting times, unhappy about medications, etc.). Patients with poor health may also have higher expectations and more concerns about quality because they want the best treatment.

Interestingly, this trend does not appear in MoH respondents (table 7.23). The p-value provides no evidence to suggest a significant association between MoH respondents' health status and their overall satisfaction with the quality of PHC services.

7.8.10. Chronic and longstanding illness

MoI and MoH respondents

Tables 7.22 and 7.23 show MoI and MoH respondents with and without chronic and long-standing illness expressed similar views on their overall satisfaction. Corresponding p-values were 0.097 and 0.623, respectively.

7.8.11. Transport to PHC centres

MoI respondents

MoI respondents who used public transport and those who used private transportation, for example, cars, did not differ in their overall satisfaction with the quality of health care. The corresponding p value was 0.71. This may be due

to the fact that most MoI PHC centres are located inside military barracks and therefore distance was not an issue for respondents.

MoH respondents

Unlike MoI respondents, MoH respondents who used private transportation (e.g. cars) were overall less satisfied, -8.9 (-16, -1.7), than those who used public transport (e.g. walking, buses). The corresponding p value was 0.015, which indicates the difference between the two groups was statistically significant.

7.8.12. Marital status

MoI and MoH respondents

MoI and MoH married and unmarried respondents' overall satisfaction levels were similar. There were no statistically significant differences between groups and sectors. Corresponding p-values were 0.056 and 0.527, respectively.

7.8.13. Multivariate regression

MoI respondents

In this section, a multivariate random effects regression model was constructed to examine coefficient changes in respondents' sociodemographic variables after adjusting for other confounding variables. In other words, this section examines the association between the outcome variable (overall satisfaction) and an independent variable (e.g. age groups), and also takes into account potential influence variables (confounding variables), such as gender, education and employment, etc. As can be seen from table 7.22, respondents' sociodemographic variables responded in different ways after adjusting for confounding variables. For instance, age groups' coefficients increased very slightly but the p-value was almost identical (0.78 to 0.79) by crude estimate. This shows that different age groups' overall satisfaction with PHC services quality was almost the same, even when other variables were taken into account, such as gender and employment. Table 7.22 shows the only variable which substantially changed when adjusted

for confounders was respondents' marital status. The p-value for this group dropped from insignificant at the 5% level to statistically significant with a p-value of 0.011. This suggests there was a difference between married and unmarried respondents, which was masked by confounding variables.

MoH respondents

Table 7.23 highlights a relationship between age group and satisfaction, in that people aged 25 –34 were less satisfied. This is not influenced by any other confounding variables. The relationship between employment and satisfaction which appears in the univariate analysis disappears in the multivariate analysis. This could be due to the confounding effect of age. It is likely that age is related to employment status.

7.9. STAGE (5): KEY DETERMINANTS OF SATISFACTION WITH QUALITY OF HEALTH CARE

As table 7.24 demonstrates, random effects regression with overall satisfaction as the dependent variable and subscales of satisfaction as independent variables indicates significant correlation between these variables. In order to determine predictors of high quality care, and which aspect of PHC quality had more association with respondents' overall satisfaction, a backward stepwise regression model was constructed.

Although many authors have reservations about this analytical approach,[292,330,336] it has proven useful, with a long application in health care studies, including GPAS studies.[340] In this regard, Hamilton argues that " despite their drawbacks, stepwise methods meet certain practical needs and have been widely used"(Hamilton, p.186[341]). Advanced statistical software packages such as STATA enable researchers to undertake stepwise regression with robust standard errors to account for clustering effects in the data. The backward stepwise regression model constructed in this study specified a cut-off point of

0.05 to be the significance level for removal from the model (all GPAS scales were included in the model).

Table 7.23 : Relationship between subscales of satisfaction and overall satisfaction

Quality Scales	Coefficient	95% CI	P-value
Access	.81	(.73, .89)	<0.001
Receptionists	.43	(.36,5)	<0.001
Continuity of care	.39	(.32, .47)	<0.001
Communication	.65	(.57,73)	<0.001
Interpersonal care	.63	(.55,7)	<0.001
Doctor's knowledge of patient	.59	(.52,66)	<0.001
Enablement	.38	(.32,45)	<0.001
Referral	.09	(.04,15)	<0.001
Nursing care	.64	(.56, .72)	<0.001
Cultural and religious issues	.77	(.69, .85)	<0.001
Psychological issues	.54	(.46, .62)	<0.001
Community Participation	.56	(.5, .62)	<0.001
Organisation of services	.71	(.65, .78)	<0.001

With regard to MoI respondents, the stepwise regression model presented in table 7.25 shows four of the GPAS scales, namely: nursing care, enablement, access, and community participation, account for 65% ($R^2 = 0.65$) of the variance in their overall satisfaction with primary health care. Thus, it can be concluded that, of the quality attributes measured in GPAS these four aspects appear to be most important for MoI respondents since they contribute to 65% of their overall satisfaction.

Table 7.24: Key determinants of quality

	Coef. (95% CI)	Robust Std. Err.	t	P-value	R^2	P-value
MoI Sector						
Overall satisfaction	1					
Nursing care	0.4 (0.2,0.5)	0.08	5.2	<0.001		
Enablement	0.2 (0.1,0.3)	0.05	4.9	<0.001	0.65	<0.001
Community participation	0.2 (0,0.4)	0.07	3.4	0.02		
Access	0.2 (0,0.4)	0.08	2.7	0.04		
MoH Sector						
Overall satisfaction	1					
Organisational issues	0.4 (0.3,0.6)	0.07	7.1	<0.001	0.43	0.0004
Community participation	0.2 (0.1,0.4)	0.06	4.2	0.01		
Enablement	0.3 (0,0.5)	0.09	3.4	0.02		
MoI & MoH						
Overall satisfaction	1					
Religious & cultural issues	0.3 (0.1,0.4)	0.07	4.5	<0.001	0.58	<0.001
Organisational issues	0.2 (0,0.4)	0.09	2.9	0.01		
Enablement	0.2 (0.1,0.3)	0.05	4.6	<0.001		
Access	0.2 (0,0.4)	0.08	2.5	0.03		
Community participation	0.1 (0,0.3)	0.05	3.3	0.01		

Regarding the MoH sector, as can be seen from table 7.25, three quality aspects are identified as having a significant association with overall satisfaction: organisational issues, community participation, and enablement. The R^2 value was 0.43, which means this model explained 43% of the variance in MoH respondents' overall satisfaction with primary health care.

Table 7.25 shows that, for both sectors, there are five aspects of care which appear to be most important: access, religious & cultural issues, organisational issues, enablement, and community participation. The R^2 value was 0.58, which means that 58% of the variance in MoI and MoH respondents' overall satisfaction is explained by these five aspects of care.

7.10. RESPONDENTS' RANKING OF THE PRIORITY OF PHC QUALITY ASPECTS

In the last question of the study questionnaire, which was not included in the GPAS, respondents were asked to rank aspects of primary care quality according to their priority. Results shown in table 7.26 indicate that MoI respondents ranked the following five areas of care as most important to them: cultural issues, organisational issues, access, psychological issues, and doctor's knowledge of the patient.

In contrast, table 7.27 shows that MoH respondents ranked cultural issues, organisational issues, access, doctor's knowledge of patients, and psychological issues as the most important aspects of quality.

Looking at the aspects identified, it is not immediately clear why results generated a slightly different priority order between the two sectors. Perhaps respondents confused ranking aspects of care in general and evaluating current services.

Surprisingly, the results presented in tables 7.26 & 7.27 revealed that community participation aspect was ranked by respondents from both MoI and MoH as the least important aspect of care. This contrasts with what other analyses show, particularly the results presented in tables 7.24 & 7.25, which indicate that community participation is highly associated with overall satisfaction. It was probably ranked the least important aspect because respondents considered other issues more directly related to their health and well-being as more important. However, this issue will be discussed at greater length in chapter nine.

Table 7.25: Ranking of the priority of PHC aspects: MoI respondent'

Quality attributes	n	Mean	Std. Dev.	CI 95%
Cultural issues	416	4.83	.417	4.7, 4.8
Organisational issues	419	4.77	.574	4.7, 4.8
Access	415	4.74	.567	4.6, 4.7
Psychological issues	413	4.71	.594	4.6, 4.7
Doctor 's knowledge of the patient	419	4.69	.570	4.6, 4.7
Enablement	411	4.61	.717	4.5, 4.6
Overall satisfaction	421	4.59	.664	4.5, 4.6
Nursing care	414	4.58	.642	4.5, 4.6
Receptionists' care	406	4.54	.717	4.4, 4.6
Referral	409	4.50	.836	4.4, 4.5
Communication with the doctor	404	4.44	.842	4.3, 4.5
Interpersonal care	420	4.43	.894	4.3, 4.5
Continuity of care	412	4.43	.910	4.3,4.5
Community participation	412	4.18	1.03	4, 4.2

Table 7.26: Ranking of the priority of PHC aspects: MoH respondents

Quality attributes	n	Mean	Std. Dev.	CI 95%
Cultural issues	430	4.78	.645	4.7, 4.8
Organisational issues	435	4.77	.596	4.7, 4.8
Access	437	4.75	.541	4.7, 4.8
Doctor's knowledge of the patient	426	4.64	.715	4.5, 4.7
Psychological issues	428	4.64	.759	4.5, 4.7
Overall satisfaction	433	4.59	.772	4.5, 4.6
Enablement	434	4.57	.741	4.5, 4.6
Nursing care	431	4.56	.688	4.5,4.6
Receptionists' care	431	4.56	.698	4.4, 4.6
Referral	415	4.52	.783	4.4, 4.6
Interpersonal care	431	4.51	.820	4.43, 4.5
Communication with the doctor	421	4.45	.862	4.3, 4.5
Continuity of care	429	4.41	.939	4.3, 4.5
Community participation	429	4.09	1.04	3.9, 4.1

7.11. SUMMARY

This chapter has presented data derived from the analysis of the patient survey, with the aim of addressing the first two objectives of this study. The chapter was structured around five stages, which moved from descriptive to inferential analysis.

In terms of the sample characteristics, this study examined twelve sociodemographic variables of the 866 respondents participating in the study.

Findings suggest that the majority of the study sample can be described as being young married Saudis (in their thirties), educated, mostly governmental employees (either military or civilian). In the sample, males outnumbered females almost 2:1 (see table 7.3). The majority described their overall health status as good or very good, without long-standing illness or disabilities. MoI and MoH respondents differed to a statistically significant extent in six variables: gender, education, nationality, accommodation, registration with PHC, and overall health status. This finding reflects the distinctive characteristics of military personnel compared to the general population.

There was no evidence that MoI and MoH respondents differed in their views of quality of PHC services. However, findings pointed to variation of quality of care between individual PHC centres.

In terms of the MoI sector as a whole, respondents were satisfied with the following aspects of care: referral to specialists, cultural & religious issues, receptionists' care, access, and communication with doctor. However, five aspects of care which attracted the lowest mean scores were: organisation of services, enablement, nursing care, doctor's knowledge of the patient, and community participation.

Taking the MoH as a whole sector, respondents evaluated the following five aspects as most satisfactory: referral to specialists, cultural & religious issues, receptionists' care, communication with doctor, and access. In contrast, they were least satisfied with the following aspects: interpersonal care, overall satisfaction, organisation of services, doctor's knowledge of the patient, and community participation.

Mean scores for each quality scale in both sectors were compared to UK benchmark figures, and findings suggested that, with the exception of access, mean scores for all scales were lower than the benchmarks, suggesting Saudi patients were less satisfied than their UK counterparts.

The analysis further suggests that most respondents were satisfied with current working hours and were able to see their doctor or any doctor in the PHC centre on the same day. However, respondents' desire for additional working hours was influenced by their sector. For instance, MoI respondents were more likely to choose early morning additional working hours than MoH respondents, presumably because of the nature of the military lifestyle (e.g. attending very early military sessions). Findings show the median waiting time for MoI respondents was between 6-10 minutes compared with 11-20 minutes for MoH respondents. In contrast, MoH respondents likely to gain access to their usual doctor or any doctor faster than MoI respondents. MoH respondents appeared to have higher expectations than MoI respondents, as although they were able to access doctors faster, they were less satisfied with their current speed of access. This finding may be due to military personnel being less willing to complain.

In order to assess the influence of respondents' sociodemographic variables on their overall satisfaction with quality of care, two analytical procedures were undertaken. First, univariate analysis indicated that for MoI respondents only three variables were associated with overall satisfaction: gender, civilian employment, and overall health status. However, multivariate analysis revealed marital status was the only highly significant variable after adjusting for other confounders.

To control for the influence of sociodemographic variables on the evaluation of quality between the two sectors, scores for each quality scale were adjusted for sociodemographic variables, and results indicated that MoI and MoH respondents' views on quality differed significantly in three areas: communication with doctor, doctors' knowledge of the patient, and overall satisfaction.

Similarly for MoH respondents, univariate analysis pointed to five sociodemographic variables that were highly associated with overall satisfaction: age, gender, education, employment civilian, and transport methods used to travel to PHC centres. However, multivariate analysis revealed only three

variables remained highly associated after adjusting for other confounders: age, gender, and transport methods.

This study found MoI respondents identified nursing care, enablement, community participation, and access as key determinant aspects of quality and these factors explained 65% of their overall satisfaction. In comparison, MoH respondents identified organisation of services, community participation, and enablement as key determinants of quality and these explained 43% of their overall satisfaction.

Finally, respondents from both sectors were asked to rank the most important aspects of quality for them. MoI respondents attached most importance to five aspects: cultural and religious issues, organisation of services, access, psychological issues, and doctors' knowledge of patients. In contrast, the top five aspects for MoH respondents were cultural issues, organisation of services issues, access, doctor's knowledge of the patient, and psychological aspects of care.

CHAPTER 8. HEALTH KEY INFORMANTS' VIEWS: QUALITATIVE DATA

8.1. INTRODUCTION

This chapter presents findings derived from analysing semi-structured interviews with ten key health care informants (doctors, PHC service managers, and policymakers). The aim of this chapter is to accomplish the study's last two objectives, namely:

- To explore the views of doctors working in PHC, health service managers, and senior policymakers on the quality of PHC, and compare them with patients' views.
- To explore the extent to which doctors working in PHC, health services managers, and senior policymakers take patients' views on quality into account when making decisions about PHC services

In order to facilitate the aim of this chapter, the findings are presented under three main thematic sections, with sub-themes within each section. Section one presents health care informants' views on PHC services, including their perspectives on PHC history, policies and developments, and the constraints faced by PHC services in Saudi Arabia. Section two presents informants' perspectives on the quality of PHC services, and includes a discussion of quality indicators, the ideal model for quality, and research on primary care. The final section details health care providers' views on PHC patients in terms of their perception of patients' awareness of the primary care idea, the importance of patients' views, methods to obtain their views, handling and responding to patients' views, obstacles to obtaining patients' views, and patients' rights.

8.2. SECTION ONE: HEALTH CARE INFORMANTS' VIEWS ON PHC SERVICES

8.2.1. Function and characteristics of Primary care

Health care informants interviewed were able to provide a historical and strategic overview of primary care plans in Saudi Arabia. As noted in chapter two, the notion of PHC varies considerably between developed and developing countries. Policymakers participating in this study were keen to highlight this and stressed two points: (i) the primary care idea is relatively new to the Saudi health care system, (ii) and primary care initiatives practised in the Kingdom are derived from the WHO's Alma Ata declaration (see table 8.1).

Although it was unclear whether adoption of the PHC initiative was the result of a local imperative or influenced by the WHO and part of the global trend to implement PHC, most informants indicated, particularly policymakers, that the Saudi government when it decided to adopt the PHC initiative, took several steps to ensure its success. These steps included social and economic commitments and implementations within national strategic plans (see table 8.1).

PM1, PM2 and PM3 expressed similar views regarding the function of PHC in the Saudi health care system. They viewed PHC as a basic but comprehensive health care provision that integrates both curative and preventive aspects of care. The function of PHC services in their view is dual: as the first line of contact between users and the health system, and as a gatekeeping mechanism to higher care, such as hospitals.

Table 8.1: : Informants' views on the origin of the PHC initiative and government commitment to its success

WHO derived PHC initiatives	PM1 commented: "PHC services are a relatively new idea around the world and have been implemented here in Saudi Arabia after the Alma-Ata conference in the former USSR."
Full commitment to PHC initiative	PM1 stated: "The PHC programme is a programme that was adopted by the Kingdom more than 20 years ago and is a policy and a strategy to which the Ministry of Health is committed."

Preventive and curative care

PM1 referred to two major components of PHC: curative and preventive aspects of care. M8 suggested some elements that might be included in curative and preventive care (see table 8.2). Most informants (PM1, PM3, PM4, D9, D10, and M8) made reference to the importance of preventive care as a central principal concept of PHC provision, but also stressed that such care is less popular than curative care. PM1 estimated that around 50 million patients every year (in all MoH PHCs around the Kingdom) seek curative care while D9 estimated that around 20% only of patients seek preventive care (see table 8.2).

D10 provided insight into the targets and beneficiaries of preventive care measures. He indicated that preventive care has two aims: a specific aim in which the PHC targets discrete categories of patients (e.g. raising awareness among diabetic patients) and a general aim of targeting the intact community (e.g. promoting healthy living initiatives, such as give-up smoking campaigns). D10 also pointed out that PHCs collaborate with other governmental agencies to raise awareness of issues, such as safe driving (see table 8.2)

PM4, who worked for MoI PHC services, stated that the concept of PHC services, which includes preventive and curative care in the MoI sector, does not differ from that in the MoH sector, except PHC sites are accessible only to a certain group in the community (see table 8.2)

Table 8.2: Issues related to preventive and curative care

Explanation of preventive and curative care	PM1 explained: "The curative part usually involves providing essential and common diagnoses and medication for all the community." "The preventive part includes providing pre-emptive measures to reduce or eliminate future disease or illness, for example, providing vaccination for adults and children and child and maternity programmes." M8 made reference to: "Services like health education, life expectancy promotion, immunisation, and curative services like occupational and clinical based services."
Importance of preventive care	M8 said: "Generally, clinical based services are most demanded by patients whereas, on the other hand, current studies recommend more attention be given to preventive care because preventive care, in the long run, reduces the need for curative care. In other words, one of the preventive care principles is health education since it helps to minimise patients' visits, medication prescriptions, dressings, and test costs."
Example of preventive care	D10 indicated: "We also have education programmes for patients to raise awareness about common illnesses and how people should keep to a healthy diet... Also, we cooperate with other governmental agencies to promote general safety issues. For instance, we cooperate with the traffic police department to promote safe driving to reduce the death toll on our roads. We also provide free leaflets and posters throughout the centre to our patients."
Unified concept of PHC	PM4 explained: "PHC centres are assigned to providing a primary level of care to all the Ministry's employees and their dependants...Both civilians and military personnel and their dependants are eligible for access and free treatment. The PHC centres provide both curative and preventive services, just like normal PHC centres elsewhere, however, our PHC centres target the groups of people mentioned above."

Gate keeping

D10 and PM4 pointed out that the PHC centre's role, as well as providing preventive and curative care, also includes controlling referral to hospitals. By controlling referral to hospital care, PHC aims to relieve the pressure on specialists by preventing unnecessary referrals of patients whose medical needs can be met by a GP. This, according to PM4 and D10, is important, since excessive patient numbers can cause long waiting times at hospitals.

D10 commented:

> *"PHC centres are usually prepared to receive MoI patients who are eligible for treatment. They are in the front line of the health care system in the MoI. Each patient who needs to go to the main hospital has to be referred from here or a similar PHC centre to the hospital [ ] In most cases, we are able to treat patients here but if medical conditions require referral to a specialist we refer the patient to the hospital."*

Developments in primary care

Informants in the last section identified the general function and characteristics of PHC services in Saudi Arabia. In this section, informants highlight developments by the Saudi health authorities to the original 'package' of PHC designed and promoted by the WHO. According to PM1 and PM3, although the original PHC package introduced by the WHO 25 years ago is still useful, recent changes in health care patterns (mortality and morbidity rates, lifestyle, life expectancy) in Saudi Arabia necessitate a review of the original programmes. PM3 explained why he thought the original programmes introduced by the WHO 25 years ago need to be reviewed and updated (see table 8.3)

Although PM1 and PM3 agreed recent developments aim at localising PHC services to address the Saudi people's needs, they described these from two different perspectives. For instance, PM1 described newly introduced developments to original PHC programmes as 'supporting services' aimed at supporting similar services offered by hospitals, presumably to overcome or reduce emerging delivery challenges, such as waiting times, and to reduce costs. PM1 appeared to suggest these new services have an indirect role, namely, to facilitate the function of gatekeeping. PM3 viewed these new developments from another perspective. He linked the need to develop new programmes to those already existing in the original PHC introduced by the WHO, to newly emerging morbidity patterns in the Saudi population (see table 8.3).

Table 8.3: Reasons for PHC review

Need for PHC review	PM3 stated: "If we look at the current situation and the present pattern of morbidity in Saudi Arabia, services which were provided 15 years ago need to be reviewed. For instance, in the past attention greatly focused on issues like immunisation, safe motherhood, diarrhoea, and fistula diseases, but during the last ten years other illnesses related to human lifestyle have started to emerge. These illnesses are directly linked to nutrition patterns and environmental factors not only in Saudi Arabia but in other neighbouring Gulf states. We have started to notice widespread illnesses like heart and arterial diseases, diabetes, obesity, mental illness. On the other hand, life expectancy for men and women has gone up to 72 years, so health services' provision needs to undergo a periodic and systematic review to address new emerging issues."
PHC introduced changes as supporting services	PM1 explained: "Our primary principle health care strategies are predetermined and constant, but also evolve along with the development of PHC plans... We have in fact a wide range of services that have a high demand from patients, for instance, very good programmes for chronic illness care, elderly care, and psychotic illness care. All these services, however, come under development services, not under curative or preventive services, and are more like support services to the services provided by hospitals."
Morbidity pattern as the cause of change	PM3 commented: "In Saudi Arabia we have not only adopted primary care programmes but also tried to develop them to meet newly-emerging patterns of morbidity. The developed concept takes account of local peoples' needs, for instance, we have introduced mental health care in our PHC centres which did not exist in the original Alma Ata declaration. Also, we have introduced elderly care centres and, in the last three years, an initiative called "caring for chronic illnesses" has been introduced to address chronic illness problems applying the mini clinic concept."

8.2.2. Informants' views on challenges facing PHC services

Almost all informants agreed that PHC services in both MoH and MoI sectors face real challenges, most of which derive from administrative related issues. Grouping informants' views into thematic sections revealed these challenges are driven by a number of factors summarised below:

Managerial

- Time constraints
- Work load (doctors over booked, short medical consultation times)
- Communication barriers between PHC team (i.e. language problems)
- One-way communication with higher officials (i.e. centralisation, bureaucracy)

Resource constraints

- Fund issues
- Increase of health cost
- Evidence of variation between PHC centres (not all PHC centres are fitted with the same equipment, some serve larger populations

Patient-side

- Vandalism
- Abuse of workers (i.e. insulting behaviour to workers results in a defensive attitude by doctors and staff)
- Abuse of resources (i.e. attendance without genuine medical need, non-compliance)

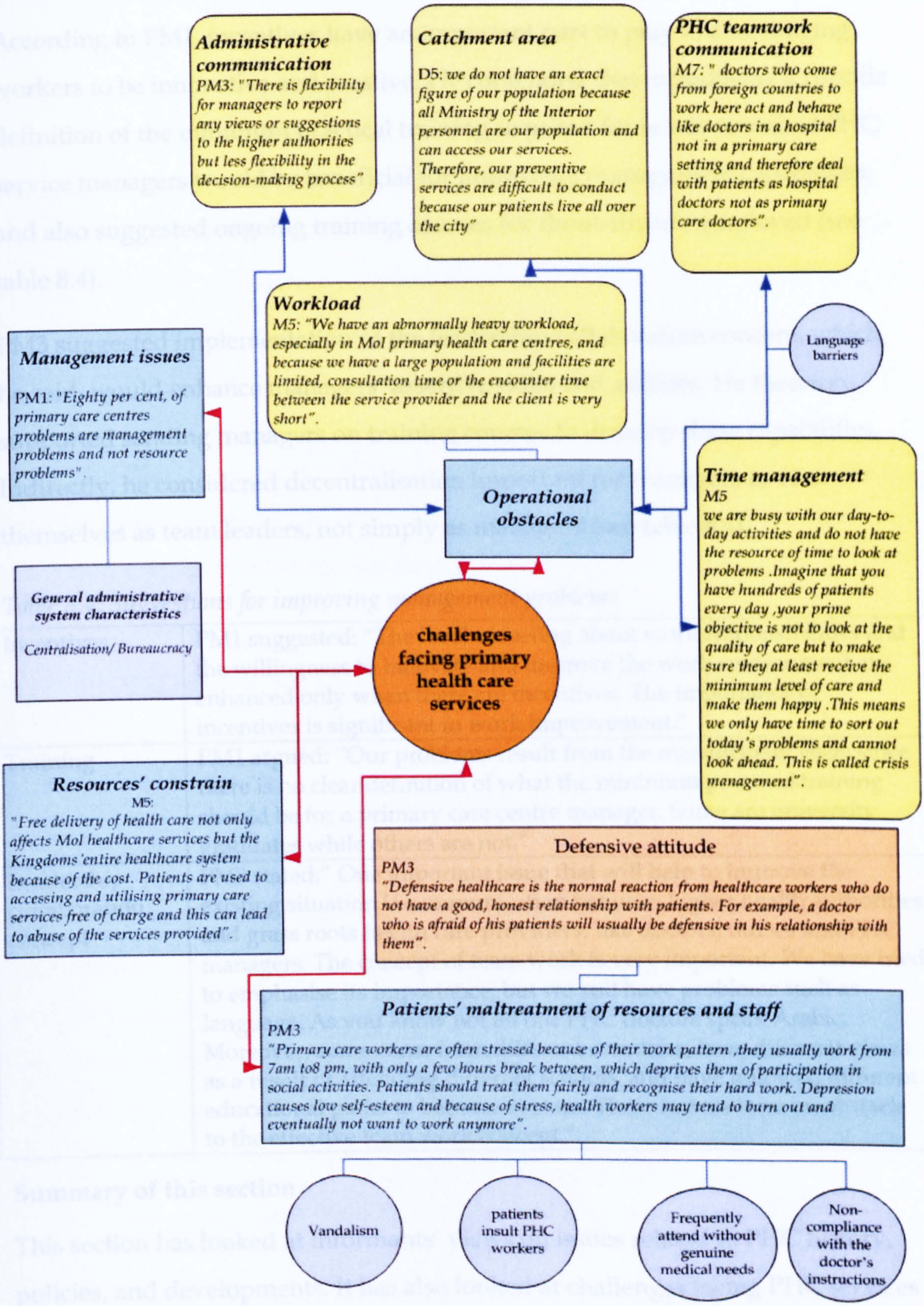
Catchment area

Interestingly, the issue of defined catchment area appears to be more of a problem for MoI PHC services than MoH PHC centres. As indicated by PM2, MoH PHC centres are designated to serve a defined population (e.g. one neighbourhood). However, there is no defined catchment area for each MoI PHC centre. M5 felt this omission contributed directly to the difficulties the sector currently faces, particularly the delivery of preventive care. He explained this situation as follows:

"Our PHC centre consists of multiple PHC clinics and is accessible to all MoI employees, training cadets, retired employees, etc. Up to this time we mainly provide occupational clinical based services rather than preventive services, for many reasons. First, we do not have an exact figure of our population because all Ministry of the Interior personnel are our population and can access our services. Therefore, our preventive services are difficult to conduct because our patients live all over the city."

Figure 8.1 below summarises informants' views on challenges facing PHC services in Saudi Arabia.

Figure 8.1: A summary of key health informants' views on challenges facing PHC services in Saudi Arabia



8.2.3. Suggested trajectories for improving management problems

According to PM1, incentives have an important part to play in encouraging workers to be innovative and creative. He contended that introducing a specific definition of the minimum practical training required for newly recruited PHC service managers would be beneficial for improving management capabilities, and also suggested ongoing training courses for those already employed (see table 8.4).

PM3 suggested implementation of the leadership collaboration concept, which, he said, would enhance managers' assertive skills and abilities. He therefore supported sending managers on training courses to develop these capabilities. Indirectly, he considered decentralisation important for managers to view themselves as team leaders, not simply as managers (see table 8.4).

Table 8.4: Suggestions for improving management problems

Incentives	PM1 suggested: "The level of feeling about work responsibilities and the willingness to innovate and improve the work environment are enhanced only when there are incentives. The importance of incentives is significant in work improvement."
Training	PM1 argued: "Our problems result from the management issue since there is no clear definition of what the minimum practical training should be for a primary care centre manager. Some are university graduates while others are not."
Leadership collaboration concept	PM3 stated:" One important issue that will help to improve the existing situation is communication between higher health authorities and grass roots health care providers, like doctors, nurses and PHC managers. The concept of team work is very important. We have tried to emphasise its importance, but we still have problems such as language. As you know not all our PHC doctors speak Arabic. Moreover, some come from different countries, have different views as a result of attending different schools, and have followed different educational paths to become doctors. These factors form an obstacle to the effective team work concept."

Summary of this section

This section has looked at informants' views on issues related to PHC history, policies, and developments. It has also looked at challenges facing PHC services in Saudi Arabia and informants' attitude towards these challenges. The main

finding from this section is that PHC services are a relatively new concept in Saudi Arabia and characterised by two main aspects of care: curative and preventive. PHC services also serve a gatekeeping function in the Saudi health care system. The original programme for PHC services was introduced by the WHO in 1979 as indicated by several informants. They also referred to new emerging health conditions (e.g. obesity, heart disease) that have accompanied rapid economic development in the country and new programmes added to the original WHO/PHC initiative to reflect these new health patterns and to address them. Informants also highlighted some of the main challenges facing PHC services in Saudi Arabia. These challenges can be divided into three groups (see figure 8.1): management challenges, patients' abuse of resources and lack of awareness of primary care's role, and financial and human resources' constraints. Some informants appeared to claim that MoH centralisation and bureaucracy are to blame for deficiencies at management level.

8.3. SECTION TWO: HEALTH CARE PROVIDERS' VIEWS ON THE QUALITY OF PRIMARY CARE

8.3.1. Quality indicators

Among informants, especially policymakers, there was noticeably strong agreement as to the importance of PHC, and all agreed that quality initiatives were an important aspect of Saudi health care policies, although they may have conceptualised quality by focusing on different aspects. For example, PM1 discussed the importance of quality from a managerial perspective, focusing on what improvement could offer or help to achieve. He said:

> *"Improvement in the quality of public health in general has increased life expectancy and reduced mortality and morbidity rates."*

Although PM2 held a similar view regarding the importance of the managerial perspective, he supported a mixed approach comprising both a managerial focus

on monitoring and control and a patient-centred focus on the provision of quality services. He stressed the importance of patients' evaluation of quality initiatives:

> *"Our quality assurance programme enables us to measure changes in patients' attitude to services when we introduce changes. Every two years we assess all our services and the last report showed overall a positive response to the services we provide."*

8.3.2. Ideal model for quality

Informants can be divided into two groups regarding their views on what is the ideal model for quality in PHC. The first group viewed components such as the physical and organisational structure and doctors' technical competence as most essential for providing quality care. In the second group's view, the PHC centre's involvement in broad issues, such as community participation, health education, and multisectional collaboration, including media support, would constitute an ideal model for quality in PHC. PM1 and PM2 subscribed to the first group's view and indicated that lack of physical and organisational facilities may contribute to patients' dissatisfaction (see table 8.5).

The other group of informants, including PM3 and M7, felt that community participation, media support, and improvement of management skills were the most important issues that should be considered to achieve an ideal model for quality. Like PM3, M7 viewed health care education and community participation as central to improving and maintaining good quality care. He emphasised the importance of local people's contribution to the success of both. M7 also felt that local community leaders have a crucial role to play in getting the message across to the wider community (see table 8.5)

On the other hand, M5 thought the ideal model of quality could be achieved by ongoing research. He also supported the use of information technology in PHC, such as the use of the Internet, to encourage patients' involvement. However, M5 was cautious about the utilisation of research at PHC level. He felt such an approach might require more resources and effort than anticipated.

Discussing the doctor-patient relationship, doctor informants suggested that an ideal doctor-patient relationship model starts with easy access and sufficient time for the clinical encounter. In this regard, D10 admitted that the ideal model had not yet been reached. In his view, a good doctor patient relationship is important for improving continuity of care and patients' overall satisfaction as satisfied patients are more likely to take an active role in their health care (see table 8.5). D9 referred to a broader approach that doctors should adopt to improve the quality of the doctor-patient relationship. In his view, the ideal way to meet patients' needs is a holistic approach, and with particular reference to military personnel, D9 suggested that an effective medical records system is needed to address the transient nature of these patients.

In more general terms, remarking on his ideal model of quality, D10 stressed that administrative levels have a vital role in ensuring PHC principles are fully implemented. In his view, collaborative effort is needed from all health care provider levels (see table 8.5).

Table 8.5: Views on the ideal model of quality

First group views	PM1 commented: "If good facilities and organisational structure are available and technically competent doctors also, then the centre will run smoothly. I believe these three components are vitally important to ensure the service provided is effective and efficient." PM1 admitted, however, that these facilities are not available at all centres: "However, some of our primary care centres lack these facilities. You see cramped waiting areas and huge crowds of patients at clinics which makes patients feel they just want to take their medication and go."
Second group views	PM3 stated: "First, I think the concept of health care friends' committees has to be encouraged. Second, we need very powerful media coverage to promote the goals and idea of primary care centres and to establish a common language between health providers and users. Third, continuous training for health care managers and policymakers regarding the importance of consumers' views and involvement in health care planning and to create a partnership is essential. Health institutions have to take into consideration new emerging concepts and teach their students to put patients first.... Finally, there should be regular meetings between health care providers and the local community to openly discuss local needs and research opportunities for improvement." M7 said: "I want to see more public lectures and also we should make the most of community participation by involving everybody in the process. For instance, the Imam of the Mosque could deliver his Friday sermon and give some health education advice to his audience about issues like STD [sexually transmitted diseases] because the Imam of the mosque uses religion to persuade people to act in accordance with high moral, religious principles. His words are sometimes more effective than hundreds of purely medical lectures because people are afraid of being punished by God as well as afraid of being sick... religious values are very important in our culture and they should be considered in the Saudi health care strategy." M5 commented: "I want to see more health research studies in our centres and other MoI centres. The Internet could also help in this by designing a website for patients to access and submit views. But I must warn that health research is not just designing a questionnaire and submitting it to patients, it has to be scientifically sound research to ensure accurate results. We need educated personnel, financial input, training, and organisation to achieve this objective." D10 stated: "The perfect picture would include giving patients sufficient time, but you know there are many barriers preventing this happening like lack of time and resources, which prevent an optimal doctor patient relationship." D10 contended: "Patients should have ongoing care with one doctor so doctors can provide continuous care. Also, the patient

	should have sufficient time to talk to his doctor so that he is satisfied with the consultation. These factors will contribute to patients' satisfaction and encourage them to play a greater role in their primary care services." D9 commented: "A holistic approach, which means comprehensive coverage of all aspects of the patient's welfare, including social, psychological and physical concerns, would be a beautiful thing to have with our patients". D9 suggested: "Because they are military, their type of job requires frequent transfers between cities, I would therefore suggest an effective medical records system designed and nationally accepted to overcome any adverse impacts on the doctor-patient relationship, because military personnel are one year in this city and another year in another city. If we had automated medical records we would be able to track down their medical history. This would serve the patients and be a good source of data for doctors. This does not exist at present but I want to see it in the future". D10 stated: "Full implementation of PHC principles is very important to ensure quality of services. This is not difficult but efforts from everybody are needed. The authoritative policymakers should pay particular attention to this matter."

8.3.3. Research on primary care

Almost all informants viewed research on PHC as important to improve quality and also agreed that the level of current research is not sufficient. PM1, for instance, felt research was entirely lacking in this area:

> *"I do not remember, have no knowledge of studies of this kind being undertaken".*

PM3 disagreed, pointing out that higher health care authorities had adopted a plan to encourage more health care research, particularly eliciting patients' views and expectations:

> *"A decision was taken in 1994 that studies have to be undertaken at national level not only in Saudi Arabia but also in GCC states* [the six states of the Gulf Cooperation Council]. *The studies have to address the perceptions, views and expectations of Saudi Arabian nationals towards PHC services."*

PM3 further explained that the higher authorities had also promoted the use of practical research activities, such as the use of rapid rural appraisal research:

> *"Decision makers have also undertaken rapid rural appraisal research to explore patients' perceptions. Seeking community attitudes and expectations is, I believe, a fundamental issue in planning any health care system."*

However, M5 argued that because each country differs, study findings in one country may not be generalisable to other countries:

> *"Healthcare delivery differs from one country to another and from one culture to another. Our community has its own unique culture."*

Summary of this section

This section has discussed three main issues related to quality in PHC, namely: the need for quality in primary care, the concept of and ideal model for quality, and research for improving quality. In the first part of this section, informants clearly indicated they thought quality programmes benefited PHC services in many aspects, but were divided as to which aspects of PHC would benefit most

from these programmes (i.e. doctors' views differed from those of PHC service managers). Key health care informants were also divided regarding the definition of quality. Some informants viewed its importance in relation to setting indicators to determine the progress of services. Other stated that implementation of quality in PHC enables providers to measure changes in patients' attitudes towards current and newly introduced initiatives. Learning from other countries' experiences was also supported, particularly with regard to improving quality of care.

Informants were divided in their views regarding the ideal model of quality. Some informants considered community participation and health education of key importance in improving quality. Others felt that managerial issues and ongoing learning for health care workers were more important in this respect. Doctors appeared to view quality improvement as improving patients' access to doctors and longer consultation times to enable a more holistic approach to facilitate comprehensive coverage of all aspects of patients' welfare.

The last section presented informants' views on the importance of research in PHC. Almost all agreed that research is an important tool, but some were cautious about the use of mass satisfaction surveys, which they felt might not be appropriate, but supported more efforts and resources to conduct scientifically sound research.

In general, a clear and unified message can be identified from informants' views regarding quality in health care. First, quality comprises many different components and if it is to be achieved, the community as well as health workers must work collaboratively towards this end. Second, learning from other countries' experiences, improving and conducting scientifically based research, and providing ongoing training for staff are important practical considerations for improving quality.

8.4. SECTION THREE: HEALTH CARE PROVIDERS' VIEWS ON PHC PATIENTS

Almost all informants agreed that patients are PHC services' customers and, therefore, patients' views on these services are important for quality programmes and health care policies in general (see comments of M7 and PM1 in table 8.6 below). M5 also felt patient-centred initiatives cannot be accomplished without eliciting patients' views. Listening and addressing patients' views is a prerequisite for quality accreditation. M7 asserted that practical measures have been taken to raise awareness among health care staff of the importance of patients' views (see table 8.6).

PM1 took a different approach in that he stressed the importance of patients' views but appeared to separate health outcomes and patients' views.

Table 8.6: Informants' opinions on patients' views and their importance

Opinion on patients' views	M7 commented: "One of the most important things we aim for is the satisfaction of patients. Sometimes the satisfaction of patients is more important than the satisfaction of health care workers. Sometimes doctors take on more than their capacity to handle, for example, they may see 70 patients a day to ensure all patients have the chance to access doctors."
Importance of patients' views	PM1 explained: "It is natural that any changes suggested by patients to help improve the services provided will be well received. In fact, this is a principle of quality assurance and quality improvement programmes. After the availability of the basic quality assurance principles, which are technical competence, effectiveness, and the availability of monetary resources, it is necessary to build the foundation. This comprises the administration, information, team members and patients' satisfaction. We are providing a service to whom? To patients. If the patient is not happy, the patient will not like us." M5 said: "The patient as a customer is the core of the patient-centred care approach." M5 indicated: "One of the deficiencies highlighted by the self-assessment report is we do not have an active role for the patient as a customer."

	M7 asserted: "Everybody is aware of the importance of patient satisfaction and we now have a list of four or five pages, which includes a section about the views of patients, long designed to raise awareness among health professionals about the importance of users' views."
Patients' views from a different approach	PM1 commented: "Patients' or citizens' suggestions or views are not without influence, it is just not possible for anyone's significant views to be taken into consideration....Citizens' suggestions have no direct impact on their health but can help to improve their healthcare services. There may be a difference as a result of these suggestions and views in terms of improving the quality of healthcare they receive, but not responding to their views will not increase the number of deaths and illness in the community."

8.4.1. Patients' role in health care

Almost all informants held analogous views regarding patients' role in PHC. Informants emphasised that community participation is the basis of the PHC concept. However, despite almost unanimous support for community participation, some informants cast doubts about its existence in practice. Interestingly, informants appeared to agree that the community participation concept as known and practised in many countries does not really exist in Saudi Arabia, because the involvement concept is a relatively unfamiliar concept in its society. PM1 stated:

> *"I am sorry to tell you that we have to urge our brothers and our patients to help us in planning and to provide us with information as to what they think and how they view us. Here in the Kingdom we still have not reached a mature stage with regard to community participation and non- governmental work. In other words, social support services and primary healthcare support initiatives are still novel ideas in Saudi Arabia."*

PM1 nevertheless suggested that community participation has been in practice for many years but in a form and shape differing from that meant by the WHO. Most informants contended that the common form of community participation in MoH PHC services exists in the shape of committees of health care friends.

8.4.2. Committees of health care friends

The general characteristics of committees of health care friends, as described by PM1, PM2, PM3, M7, and D9, are summarised below:

- All PHC service managers are obliged to establish and cooperate with health care friends committees.
- Representatives are *selected* by the PHC team and may include dignitaries, merchants, and residents drawn from the primary healthcare centre's catchment area.
- Members may be chosen because of their jobs and education because managers want members able to represent the whole of the PHC community.
- Committees are not established for fund raising purposes.

The role of health care friends committees in PHC may involve participation in planning discussions as indicated by PM1. Some informants felt the current approach to involving patients through health care committees adequate but in need of expansion. For instance, M7 believed that to achieve the ideal model of PHC, local communities should become more involved in health care provision. However, D9 questioned the current approach to involving patients in their health care. He suggested an alternative approach in which patients' representatives become involved and participate in quality programmes (see table 8.7)

Table 8.7: Issues related to health care friends committees

Their role	PM1 indicated: "If a new room for a laboratory is to be built or a conference room to be built, all these actions have to be discussed with committee members."
Current practice	M7 said: "If we want to implement a 100% primary care programme we must give the local community a role in it, there is no question about this."
Suggestion to improve current practice	D9 suggested: "The current situation does not allow patients to give their views on health care problems. I would want good samples of patients selected as representatives of the larger community to serve their interests in primary care activities. For example, some could participate in a quality management committee. Selected patients would be best elected by their associates to represent fellow patients' interests and concerns on the PHC management committee."

8.4.3. Patients' awareness of PHC

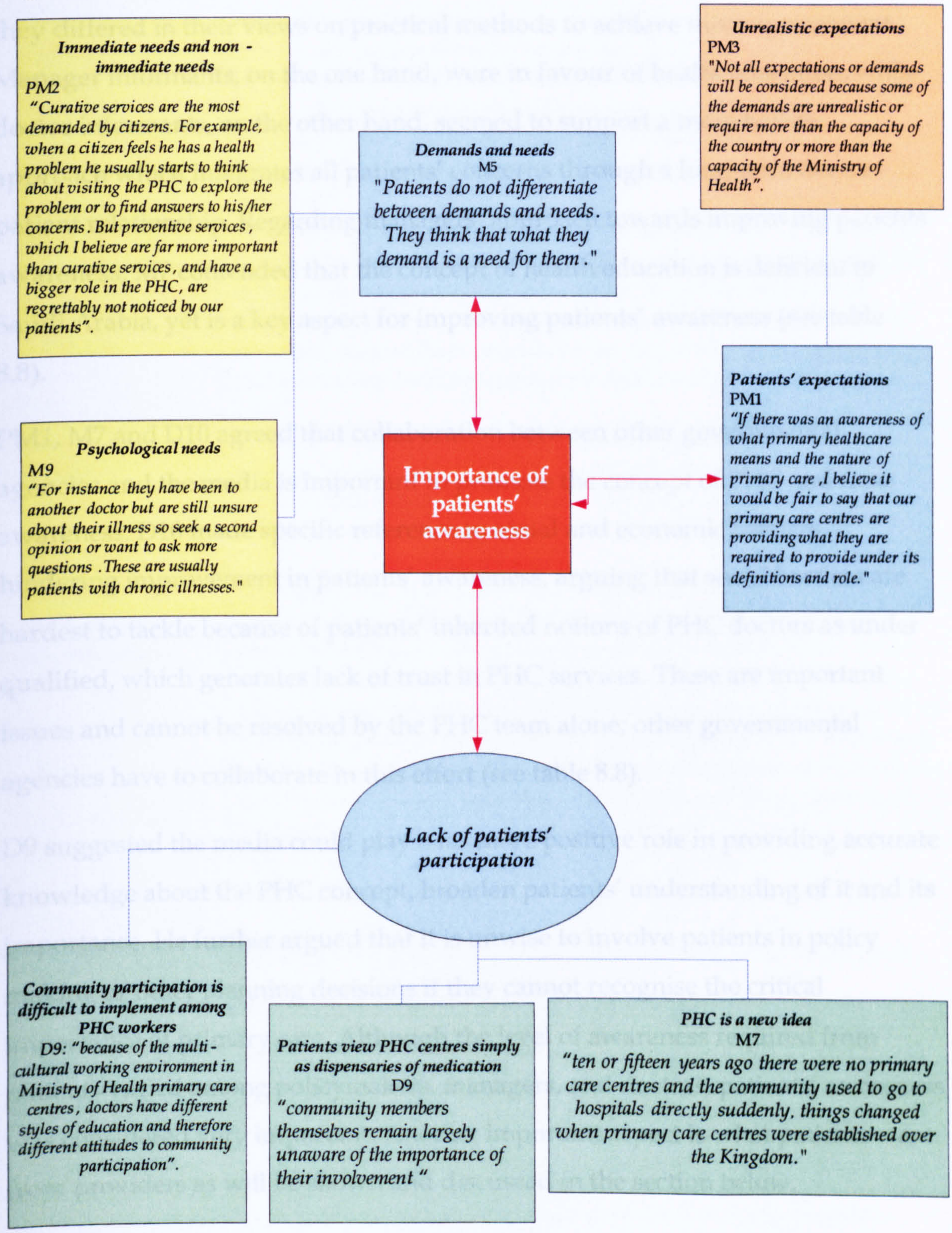
Most informants shared similar views regarding the importance of patients' awareness. Informants' views can be summarised as three main categories: 1- awareness is related to patients' expectations, 2- awareness is related to patients' demands and needs, and 3- awareness is related to patients' participation. Figure 8.2 summarises these points and presents selected quotes to reflect informants' views on patients' awareness. For instance, regarding the link between expectations and awareness, PM1 felt that full awareness of the PHC concept would inform patients' views about what to expect and not to expect at the primary level of care. Similarly, M5 indicated that lack of awareness makes patients unable to differentiate between what is needed (which providers should fulfil) and what should be demanded (which is less important than what is needed).

PM2 classified needs into immediate needs (i.e. relief from illness) and non-immediate needs (i.e. advice on leading a healthy lifestyle). He argued that awareness is important in both cases but is more important for non-immediate needs because if patients adopt preventive measures they are less likely to require services. M9 added to non-immediate needs the psychological needs of

chronically ill patients who may suffer depression/anxiety as a result of their long-term illnesses. According to him, patients in these circumstances tend not to accept the preventive nature of PHC and demand more sophisticated and advanced care because they believe this will help them overcome their illness more quickly.

M7 and D9 suggested that lack of awareness among patients may be related to the fact that the PHC idea is relatively new in Saudi Arabia and people need time to adjust to a new system, particularly after long experience with a specialist level of care. D9 also contended that awareness of community participation needs commitment from the health care team, but such commitment is unlikely to exist because of the mixed-cultural backgrounds of staff.

Figure 8.2: Informants' views on the importance of patients' awareness



Although most informants agreed that patients' awareness should be improved, they differed in their views on practical methods to achieve this improvement. Manager informants, on the one hand, were in favour of health education, while doctor informants, on the other hand, seemed to support a more holistic approach which integrates all patients' concerns through a long-term doctor-patient relationship. Regarding managers' approach towards improving patients' awareness, M7 contended that the concept of health education is deficient in Saudi Arabia, yet is a key aspect for improving patients' awareness (see table 8.8).

PM1, M7 and D10 agreed that collaboration between other governmental agencies and the media is important to promote the concept of PHC and raise awareness. D10 made specific reference to social and economic barriers hindering improvement in patients' awareness, arguing that social barriers are hardest to tackle because of patients' inherited notions of PHC doctors as under qualified, which generates lack of trust in PHC services. These are important issues and cannot be resolved by the PHC team alone; other governmental agencies have to collaborate in this effort (see table 8.8).

D9 suggested the media could play a far more positive role in providing accurate knowledge about the PHC concept, broaden patients' understanding of it and its importance. He further argued that it is unwise to involve patients in policy making or other planning decisions if they cannot recognise the critical importance of primary care. Although the level of awareness required from patients varied among policymakers, managers, and doctors, patients' awareness was considered very important. Another important aspect is what patients want from providers as will be shown and discussed in the section below.

Table 8.8: Issues related to raising patients' awareness of the concept of PHC

Doctors' view: the holistic approach	D9 explained: "I am in favour of something called 'continuity of care' which means the relationship is a long-term relationship, not an intermittent relationship. I want a relationship that not only covers physical symptoms but goes beyond this to a holistic approach, which means comprehensive coverage of all aspects of the patient's welfare, including social, psychological and physical concerns."
Managers' views: health education	M7 stated: "Throughout the Kingdom there is a deficit in patients' health education and we should not be afraid of saying this. If the community were aware that the primary care centre's role is providing preventive care programmes rather than curative care activities, its members would not be surprised that some clinical and laboratory facilities are not available at the primary level of care."
Barriers to raising patients' awareness	D9 said: "The economic barriers seem to be the easiest barriers to remove because money is not always a huge problem but people's stereotypical ideas about PHC centres are harder barriers to tackle."
PHC-media collaboration to raise awareness	D9 suggested: "It is quite often the case that patients from the moment they walk in the clinic start asking for a referral to a consultant without a clear understanding of their medical needs, which reflects a narrow understanding of the PHC concept. Even worse, some patients view PHC doctors as under qualified doctors who have failed to become consultants! Their inherited beliefs are hard to change without serious efforts from various agencies in the community. It will take a long time to convince these patients of the importance of the primary care concept."

8.4.4. What patients want

Informants held different views regarding what PHC patients want from their service providers. Generally speaking, most informants classified patients' wants as curative and preventive needs, viewing patients' curative needs as the most popular type of care.

As can be seen from Figure 8.3, informants' views on patients' wants focused on three main aspects: structural care, the process of care, and outcome of care.

Structural care

Regarding what patients want from structural care, PM2 indicated that the PHC centre's location is important for patients since they want it close to their home.

Distance to the centre and level of accessibility are important issues. PM3 also noted that patients want PHC centres to be attractive, stylish modern buildings. Their concern with the physical structure not only reflects their wish for the flexibility and comfort of modern buildings but also arises from their comparison of governmental services with those provided by the private sector and their desire for similar attractive buildings. PM3 acknowledged that most PHC centres currently run by the MoH are rented and lack what patients want which makes them unsatisfied (see table 8.9).

Process of care

Regarding process issues, such as medical competence, PM2 indicated that if patients are doubtful about the competence of their doctors they may look for other providers or switch doctors. PM3 referred to other aspects of structural care wanted by patients, particularly lab test facilities, while PM4 and D6 viewed these wants as clinical aspects of care.

Further, informants identified six main process activities (see figure 8.3) that patients expressed concern about and wanted addressed: overcrowding, long waiting times, an inefficient appointments system, language barrier, referral and cultural issues. PM3 focused on other issues important to patients. He specifically indicated improved doctor-patient communication, including the need for health information. He reported that practical measures had been taken to ensure some of these issues were being addressed, particularly during medical student training (see table 8.9).

Regarding cultural and religious issues, PM3 stated that PHC providers are aware of the gender-segregated culture in Saudi Arabia but it may not be possible to meet some patients' needs because of resources constraints. He further indicated that patients want better organised services and to have Arabic-speaking staff dealing with them in order to be able to communicate their needs effectively. In his views, this issue should be considered at the policymaking

level. However, some patients' demand to have Saudi national staff may not be achievable because of the lack of qualified Saudis working in the medical profession. Further, PM3 acknowledged that the referral system in PHC is frequently criticised by patients and showed an understanding of this issue when he referred to a study of other countries he had been involved in (see table 8.9)

General assessment of care

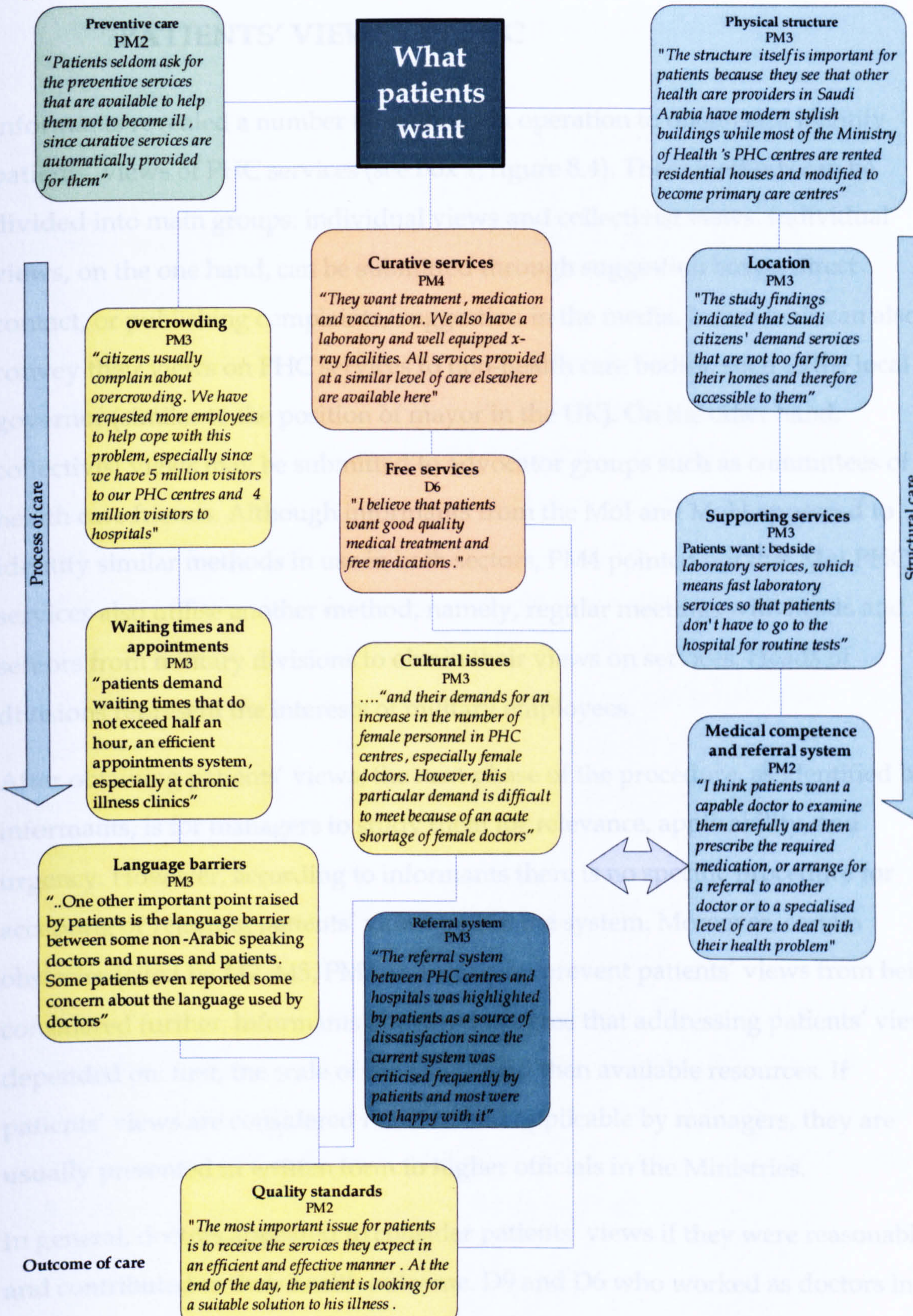
As regards general assessment of care, PM3 indicated that patients want to be satisfied with the care provided to them. He also pointed out that his research had revealed that most patients are satisfied with current services but there is still room for improvement. In some cases, there is clearly a lack of understanding of the doctor's role in PHC and its preventive role due to patients' accustomed dependence on doctors (see table 8.9).

Table 8.9: Patients' most important aspects of care

Structural care	PM3 said "inadequate structural provision makes patients less satisfied, which we do not want, and affects patient care and continuity of care, especially if patients are elderly, pregnant, or have chronic diseases. Because rented buildings usually have one staircase only and no elevators (lifts), such patients may be put off coming to them."
Process of care	PM3 reported: "patients' demand during medical encounters or clinical examinations to be given clear explanations about their health status, and eye to eye contact should last longer, which suggests that whether the doctor is kind or courteous is less important to patients than more information about their diagnosis." PM3 acknowledged: "The referral issue is also an area of concern to other countries, like the UK, where some problems have been experienced. We should not forget that the PHC has a very short history in Saudi Arabia and from time to time it needs auditing and reviewing to maintain quality and stimulate improvement."
General assessment of care	Referring to his research, PM3 commented: "The overall satisfaction level was very good, it reached 90%. However, dissatisfaction with some issues (referral, doctor-patient relationship, the lack of health information, poorly organised services, and communication difficulties with non-Arabic speaking staff) ranged from 20% to 70% and indicates a need for improvement in some areas." M7 commented: "Unfortunately, some patients have also become dependent on a passive doctor-patient relationship. I can give you an example of this. I had in my clinic a young mother with her child who was suffering from a chronic disease. The case did not require

	medication at that time and I explained the situation and the kind of nursing at home the child should receive from her, but the mother got very cross with me because she was not accustomed to this kind of medical explanation. She had in her mind a stereotype idea of the service she should receive from me which was a magical medication without lots of questions."

Figure 8.3: What patients want from their PHC centres



8.5. MECHANISMS FOR OBTAINING AND PROCESSING PATIENTS' VIEWS ON PHC

Informants revealed a number of methods in operation to obtain and identify patients' views of PHC services (see box 1, figure 8.4). These methods can be divided into main groups: individual views and collectivist views. Individual views, on the one hand, can be submitted through suggestion boxes, direct contact, or publishing complaints/suggestion in the media. Individuals can also convey their views on PHC services to non-health care bodies, such as the local governor (similar to the position of mayor in the UK). On the other hand, collectivist views may be submitted to advocator groups such as committees of health care friends. Although informants from the MoI and MoH appeared to identify similar methods in use in both sectors, PM4 pointed out that MoI PHC services also utilise another method, namely, regular meetings with heads and seniors from military divisions to obtain their views on services. Heads of divisions represent the interests of military employees.

After obtaining patients' views, the next phase of the procedure, as identified by informants, is for managers to study them for relevance, applicability, and urgency. However, according to informants there is no specific procedure for accepting or rejecting patients' views within the system. Moreover, certain obstacles (cited by M7, M5, PM3 and D6) may prevent patients' views from being considered further. Informants appeared to agree that addressing patients' views depended on: first, the scale of the views, and then available resources. If patients' views are considered relevant and applicable by managers, they are usually presented in written form to higher officials in the Ministries.

In general, doctors appeared to consider patients' views if they were reasonable and contributed to their health outcome. D9 and D6 who worked as doctors in the MoI sector gave examples of how they had addressed patients' views (see figure 8.4). According to D9, addressing patients' views encouraged them to keep

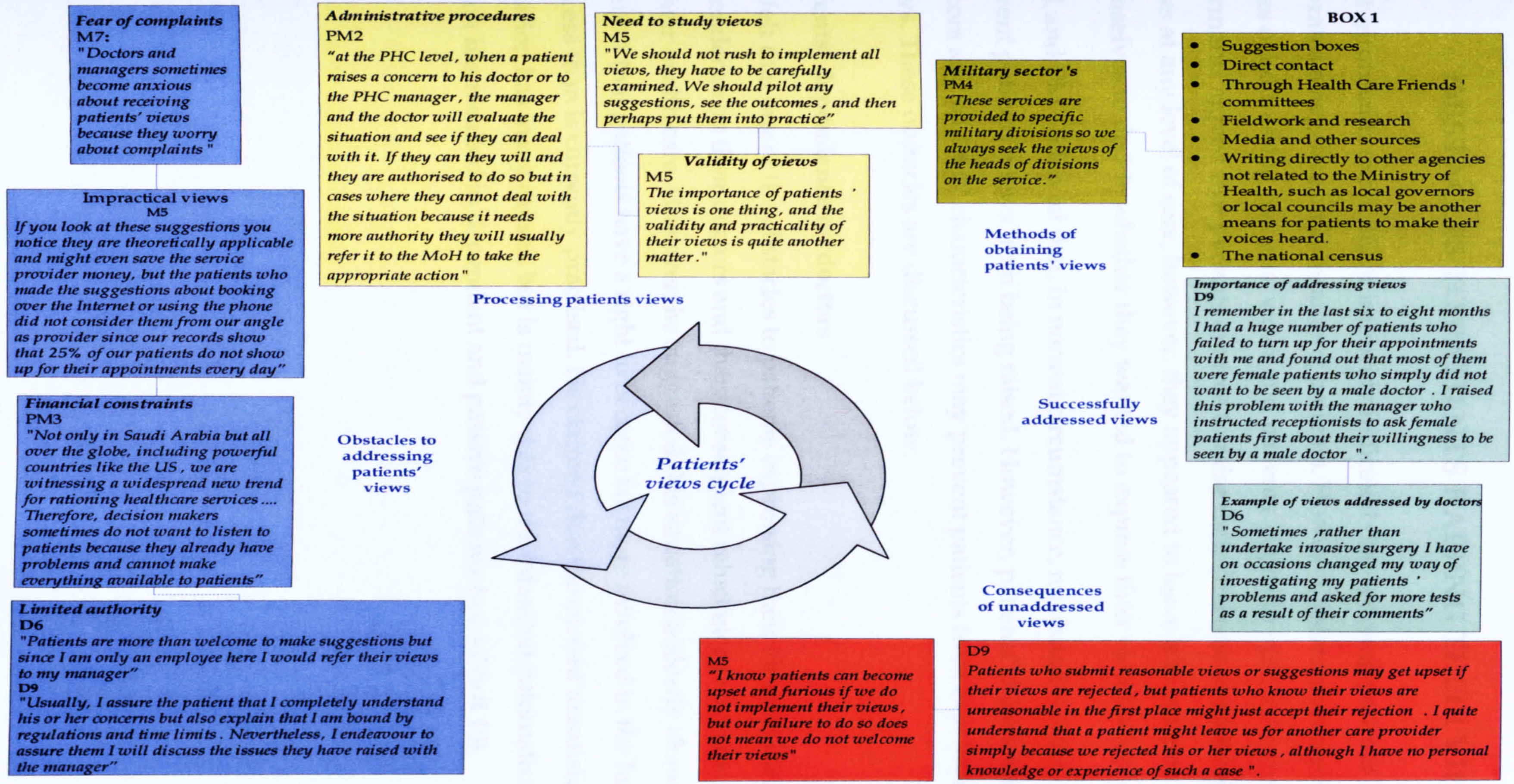
appointments. D6 indicated that listening to patients' views had changed his way of investigating their problems and increased their satisfaction with his treatment.

However, not all submitted views are addressed. Informants classified reasons for not responding to patients' views as two: (1) their views are impractical or too ambitious; and (2) obstacles derived from the system prevent such views from being addressed.

Regarding the impracticality of views, M5 claimed that some views may seem very innovative and attractive, but patients who submit such views may be unaware of the prevailing circumstances that prevent their views from being implemented. For instance, M5 indicated that some patients had submitted views to improve the appointments booking system using the Internet. However, although this seems a very reasonable and practical suggestion, and one which should be implemented, current practice shows it would not be feasible. At present, the percentage of patients failing to attend appointments is very high. Booking appointments over the Internet would likely, in his view, increase this percentage since it would be much easier to book an appointment but also easier to miss it or ignore it.

Regarding obstacles to addressing patients' views derived from the system, informants pointed to several (see figure 8.4), including fear of complaints from patients who might not accept suggested changes and whose complaints might infer inadequacy on the part of doctors and administrative staff, financial constraints (e.g. lack of funds/training to provide female doctors), the limited authority allocated to managers and doctors, and strict regulations that require higher authority approval for changes (e.g. to working hours).

Figure 8.4: Patients' views cycle



8.6. OBSTACLES TO PATIENTS RAISING THEIR VIEWS

Most informants explicitly or implicitly indicated that ignoring patients' views generates a negative attitude among patients. However, informants separated the issues of addressing patients' views and patients' rights to raise their views. Most informants agreed that patients are free to raise their concerns or express their views at any level of care, however, they appeared to leave it to patients themselves to decide whether they wanted to express their views or not.

PM1 and PM2 believed that, in normal circumstance, no obstacles exist to prevent patients' views from being raised. However, patients' dependence on doctors and patients' characteristics may prevent patients from expressing their views. These obstacles are discussed below.

Patients' dependence on doctors

M8 felt that one of the obstacles to patients expressing their views is their total dependence on their doctors and their consequent reluctance to become involved in their health care. However, he suggested this situation is slowly changing. D10 asserted that patients have a right to become far more involved in the health care process than is currently practised. He claimed that the current unsatisfactory situation has many causes, but is mainly due to the inherited paternalistic culture which has resulted in dependent and passive patients (see table 8.10).

Table 8.10: Obstacles to patients expressing their views

Dependence on doctors	M8 stated: "I think this dependence stems from an inherited attitude from long years of experience with non-Arabic speaking doctors or even Arabic speakers who have come from other countries where their medical education has not given much attention to the doctor patient productive relationship. Patients' experiences with other health care centres over the years has generated dependent patients who view the doctor as a source of medication only, but we are now working to change this. We have patients now who want to know everything about their illness, what are the causes, what options they have for treatment, how to avoid the illness in the future, etc. In the long run this is good for both the patient and us, especially in terms of reducing costs."
Paternalistic culture	D10 commented: "This issue is both important and delicate. It is important because to ensure patients' satisfaction, patients must have their say about their health. But this issue is delicate because not all patients nor doctors want this activity since they both seem to be happy with the current situation. Personally, decision making with patients depends on the patient sitting in front of me, I mean his education, experience, age....Unfortunately, we still have patients who are completely dependent on their doctors. If the doctor were to ask them to express their views about the consultation or their treatment they would prefer to remain passive and dependent. It is very difficult when you meet someone like this who thinks the doctor knows everything and suddenly you say to him I will not help you choose your treatment, you must do this yourself. I think this will upset the patient and give him the false idea that the doctor is not competent."

Patients' characteristics and their views

This section presents informants' stereotypes of types of patient likely to give appropriate or clearer, more informed views.

Education

Most informants shared similar views with PM2 who thought educated patients more likely to present their views in a rational mode than less educated ones. PM1, D9, and PM4 also agreed with PM2 regarding the importance of patients' educational level. However, D6 took a middle approach stressing that both educated and less educated patients' views are valued.

M5 viewed educational level as particularly important if patients are involved in health care committees because educated people are likely to speak English and

therefore be able to communicate more effectively with members of the health team (see table 8.11).

Gender

D9 felt that patients' gender determined their level of involvement with their doctors (see table 8.11).

Table 8.11: The relationship between patients' educational level and gender and their ability to present their views

Education	PM2 stated: "The barriers will be something to do with the opinion itself, not where the opinion comes from. But an educated patient is likely to express his or her views much more clearly which means such views are more likely to be understood and listened to. However, the social or educational background of the patient is unlikely to be part of the equation when we decide whether the view will be considered or not." PM1, D9 and PM4 agreed, commenting: "You know that we all come from a very close knit background...Most people here are from close knit backgrounds but educational level can sometimes play a role .... Always, if a man has a good educational level and has good healthcare knowledge, this man is more likely to know what is happening and what he wants than another less well educated man." D6 said: "In the doctor-patient interaction and when patients come to this primary care centre for treatment, whether they are educated or not, their views should be taken into account. However, an educated patient's way of expressing his views may differ from that of a less educated patient. What we try to understand is what the patient is saying to us, educated or not." M5 stated: "I think the patient's background is important for him to be able to understand the system of health care delivery but this is not a general statement as, sometimes, we receive great views from patients who are not well educated. So educational status is not important when we look at views submitted from patients. We study the view itself regardless of who it comes from. But when we want a patient to participate in teamwork then we consider the educational level because this variable is crucial here, simply because the teamwork discussion will be in the English language and the inability to speak or understand English may be a barrier for less educated patients."
Gender	D9 commented: "Not everybody is alike and social-cultural background also plays a part in patients' level of involvement with their doctor. Gender also determines patient's level of involvement. Men are more likely to embark on a discussion with male doctors than women and discuss many more issues with them."

8.6.1. Patients' rights

Although most informants agreed all patients had a right to express their views, this did not mean their views had to be adopted. Informants indicated that patients' rights are protected by law and as providers they must therefore take their views into account.

Shared Decision-making Rights

PM1 emphasised patients' shared decision-making rights regarding health care issues. However, he admitted that the ideal level of shared decision making had not yet been reached and this practice is not compulsory. He also referred to situations where patients might not practise their shared decision-making rights. Similar to PM1, D9 also felt that patients' circumstances influenced doctors' level of involvement with them (see table 8.12).

Rights to medical explanation

M8 felt that providing patients with an explanation about their illness and medication very important, particularly for the following reasons. First, patients who receive adequate health information, will be more likely to comply with treatment. Second, health resources will be saved because patients often throw away their medication if they are unconvinced of its efficacy. Finally, medical information helps to reduce the level of dependency among some patients (see table 8.12)

Table 8.12: Patients' rights

Shared Decision-making Rights	PM1 stated: "Shared decision...we view it as part of 'the consultation or medical encounter which comes in seven known 'shared decision-making' steps between the doctor and his patient. The purpose of shared decision-making, even if we have not reached it yet, is helping the patient visualise his/her perspective about his/her illness, which is common sense in any physician's practice. All physicians know that before they write a prescription or decide a procedure for the patient they should inform the patient about the medication to be given him/her, or that s (he) will be referred to a hospital and may need to have an operation." PM1 said: "In every country around the world...there are three

	types of patients: a patient who asks, a patient who does not ask, and a patient between these two categories who expects his doctor to tell him all he needs to know. Regarding the patient who asks, I believe there is no doctor in Saudi Arabia who would refuse to answer this type of patient's questions because it is his right to know about his situation and his illness. As for those patients who do not ask, this is a psychological issue as is well known; what we doctors call a 'grief reaction, a consolation process, because when the patient gets ill he enters into a sadness and when some people enter this stage they do not want to leave it. This makes them give the doctor the right to act on their behalf. There are others who fall between the two categories and need some explanations from the doctor." D9 stated: "As you know patients differ. Elderly patients need to be treated differently to adolescent patients, and educated patients differently from uneducated patients'. Educated patients like to go into more detail about their medical concerns whereas older patients want to get out of my clinic as quickly as possible after having their medication prescribed. Ladies like to chat about social problems and family problems and want to be given time to talk about these issues. This is called in medicine the 'consoling approach' because they want advice more than anything else."
Rights to medical explanation	M8 explained: "I consider it my duty to explain to our doctors the importance of giving a sufficient but potent explanation about patients' illness so they at least understand their medical condition. I don't want to see a sick patient carrying a bag of medication homeward without an understanding of what is going on. I continually stress to our doctors that the patient should carry the information in his head before carrying the medication in the plastic bag. This is the ultimate outcome we are after. Believe it or not a friend of mine, who works in a rural primary care centre, told me that every evening he goes through the rubbish bin around his centre to collect thrown-away, unwanted medication which he believes is a direct result of patients' dissatisfaction with their relationship with their doctors."

8.7. SUMMARY

This section has presented informants' views on various aspects related to patients' views on PHC services. It commenced by identifying informants' views on patients' role in their health care. Informants' responses revealed that patients' role in PHC is primarily expressed through Health Care Friends' committees and community participation is not yet fully activated in Saudi PHC

centres. Informants also reported that individuals may express their views to health care team members or other officials in the health sector directly or using suggestion boxes provided at each centre. Informants mentioned other means of obtaining patients' views, such as research and through the media, or in the case of military PHC centres, through consulting heads of military divisions. Informants did not identify an official strategy or policies to achieve a unified method for obtaining patients' views. Further, most informants indicated that patients' awareness of the primary care concept and idea contributed to their views and therefore their expectations of the service.

In view of this, informants suggested different methods to raise awareness among patients of the real meaning of PHC services. Informants also implied that if patients' submitted views are 'reasonable' and valid and resources are available to implement them, then they are likely to be adopted. However, most informants, particularly doctors and PHC service managers, showed less flexibility in addressing patients' views since specific procedures have to be followed to process and handle them and some views may require the attention of a higher authority than service managers.

Overall, the aim of this chapter was to address the third and fourth objectives of this study. Objective three was achieved by exploring how key health informants view quality and comparing this with patients' views. The findings showed key health informants were not homogeneous in their views. Policymakers conceived quality of care from a managerial perspective. PHC managers conceived quality of care by emphasising medical compliance and teamwork communication. Doctors viewed quality of care from the doctor-patient perspective, particularly consultation and access issues.

Regarding objective four and to what extent patients' views are taken into account when key health officials make decisions about quality, findings suggest key informants were fully aware of the importance of the patient role in quality of care and the importance of community participation. Informants pointed to the current procedure of eliciting patients' views and mechanisms of how these

views are processed in the health care system. However, despite emphasising the importance of eliciting patients' views, findings suggest that PHC services in Saudi Arabia lack a unified procedure to obtain patients' views. In many cases, informants referred to their personal initiatives and experiences of dealing with a view submitted, but no references were made to a particular mechanism specified as a policy in either sector.

It also became clear that changes, are delayed because of the lengthy bureaucratic procedures required to implement them. In other words, many different channels have to be approached before final authorisation for their implementation is given. The complex bureaucratic procedures may discourage patients from expressing their views on the service quality they want and need.

CHAPTER 9. DISCUSSION OF MAIN FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This study's main aim has been to explore, with particular emphasis on patients, how different interest groups perceive the concept of quality in PHC and what their views are regarding its priorities and merit. The importance of this aim derived from two related concepts: first, quality is a multidimensional concept and a pluralistic approach synthesising different interest groups' views on it is necessary for improving and maintaining a high standard of PHC services. Second, due to lack of scientific research in Saudi Arabia, particularly in the area of study, the present research provides the first substantial body of empirical data that health care policy makers need if they wish to improve services in ways which address the needs and wishes of the public.

Accordingly, the study set out to examine and assess the quality of PHC services provided specifically by the Ministry of the Interior (MoI) and Ministry of Health (MoH) in Saudi Arabia from the perspectives of patients, doctors, PHC service managers, and policymakers.

This chapter draws together the study's main findings and discusses their implications for policy making in the field of PHC in the country. It commences with an overview of the study's main findings. The study's limitations are then discussed. The subsequent section details the study's contribution to the body of literature in the field of quality in general and patients' views in particular. The last sections discuss the implications of the study findings for the theories of quality, patients' views, and policymakers, suggests priorities for future research, and proposes recommendations to achieve more effective PHC in Saudi Arabia. For clarity, the main findings will be summarised in relation to the study objectives.

9.1. OVERVIEW OF MAIN FINDINGS

This study set four objectives as main targets for this thesis. The following sections will present each objective and main findings relating to it. Section 9.4 will discuss the findings in relation to the extant literature.

9.1.1. Results for objective one: "To assess patients' views on the quality of primary care"

Exploratory qualitative interviews with patients suggested that an established questionnaire validated in the UK (the GPAS) would be broadly appropriate for the Saudi context, but four new dimensions of quality needed to be added, namely cultural considerations, community participation, organisation of services, and psychological aspects of care.

The final extended version of the GPAS comprised the following quality attributes: access to the PHC service; receptionists' care; continuity of care; communication with doctor; interpersonal care; doctor's knowledge of the patient; referral to specialists; enablement; practice nursing; psychological issues; religious and cultural issues; organisation of services and availability of medication; community participation; and overall satisfaction.

The extended version of the GPAS questionnaires were administered to patients who consecutively attending MoI (n=424) and MoH (n=442) primary care centres. Survey findings revealed patients' views on three distinct areas of quality: (i) aspects of quality that are most important, (ii) performance of service quality at MoI and MoH PHC centres, and (iii) determinants of quality.

9.1.2. Patients' views on most important aspects of quality of care

Analysis indicated that the five most important aspects of quality of PHC for MoI respondents were: cultural and religious issues (mean 4.83, n=416), organisation

of services (mean 4.77, n= 419), access (mean 4.74, n=415), psychological issues (mean 4.71, n= 413), and doctor's knowledge of the patient (mean 4.69, n=419).

The five most important aspects for MoH respondents were cultural issues (mean 4.78, n=430), organisation of services (mean 4.77, n=435), access (mean 4.75, n=437), doctor's knowledge of the patient (mean 4.64, n= 426), and psychological aspects of care (mean 4.64, n= 428).

The above findings lend support to exploratory interviews with patients since three of the additional four quality attributes identified in the preliminary qualitative phase were found to be particularly important themes in the patient survey.

9.1.3. Patients' views on performance of service quality

Findings indicated that in terms of the MoI as a whole, respondents were most satisfied with the following aspects of care: referral to specialists (mean 80.7, n=278), cultural & religious issues (mean 73.1, n=424), receptionists' care (mean 73.1, n=424), access (mean 69.3, n=422), and communication with doctor (mean 69.1, n=408).

Taking the MoH as a whole, respondents evaluated the following five aspects as most satisfactory: referral to specialists (mean 75.6, n=223), cultural & religious issues (mean 71.7, n=442), receptionists' care (mean 70.3, n=442), communication with doctor (mean 65.3, n=432), and access (mean 65.2, n=438).

Regarding least satisfactory aspects of care, responses from MoI respondents revealed five aspects of care attracted the lowest mean scores: organisation of services (mean 65.2, n=424), enablement (mean 64.1, n=381), nursing care (mean 64.1, n=312), doctor's knowledge of the patient (mean 64.1, n=406), and community participation (mean 54.1, n=424).

MoH respondents were least satisfied with the following aspects: interpersonal care (mean 60.6, n=432), overall satisfaction (mean 59.2, n=441), organisation of

services (mean 58.1, n=442), doctor's knowledge of the patient (mean 56.2, n= 427), and community participation (mean 46.1, n=437).

Mean scores for each quality scale in both sectors were compared to UK benchmark figures. Findings suggested that, with the exception of access, mean scores for all scales were lower than the UK's benchmark figures, suggesting that Saudi patients were less satisfied than their UK counterparts.

9.1.4. Determinants of quality

Patients' overall satisfaction was found to be strongly associated with the other thirteen quality scales (e.g. access, receptionists, nursing, etc.) in both sectors (see chapter 7, tables 7.24 & 7.25). Statistical p-values were highly significant for all quality attributes. Stepwise regression revealed that nursing care, enablement, community participation, and access to health care are all key attributes associated with satisfaction with quality of health care, since they explained 65% of the variance in overall satisfaction with PHC service quality.

In contrast, MoH respondents indicated that organisational issues of care, community participation, and enablement were the most important attributes associated with quality, since they accounted for 43% of the variance in patients' overall satisfaction with PHC service quality.

Sociodemographic characteristics and their association with overall satisfaction were found to have very little impact on respondents' overall satisfaction. This suggests patients' satisfaction was greatly influenced by the service itself, rather than their background characteristics, which contests the common assumption among health care providers, identified in this study, that patients' lack of awareness of the PHC role or educational level influence their dissatisfaction with the services rendered to them.

9.1.5. Results for objective two: "To compare the quality of PHC provided by the Ministry of the Interior and the Ministry of Health, as perceived by patients"

9.1.6. Performance of the two sectors

This objective was achieved by comparing responses on the fourteen quality attributes derived from the sample representing the two sectors. Analysis indicated that crude mean score results for all fourteen quality attributes were higher for MoI than MoH respondents. The mean score for patients' overall satisfaction with quality of care in the MoI was almost 10% higher than for MoH patients' (69.1% and 59.2%), respectively).

These scores were compared with the UK benchmark of 80.7% for overall satisfaction. The MoI score for overall satisfaction was lower by 11.6% and the MoH score lower by 21.5%. The GPAS scoring manual states that differences in mean scores greater than 10% are regarded as meaningful.[308]

Despite these findings and although there were differences in mean scores for all fourteen quality attributes between the two sectors, the corresponding confidence interval was wide and contained zero value, and hence p-values were not significant. Hence, there was insufficient evidence to claim that MoI PHC centres provide better quality care than their MoH counterparts. The findings may partly be the product of the small number of clusters available to this study.

9.1.7. Performance in individual PHC centres

Analysis of results from individual PHC centres in both MoI and MoH sectors revealed noticeable variations between performances of MoI PHC centres. King Fahad Security Academy PHC centre attracted the highest mean scores compared to other PHC centres under the MoI. In contrast, responses from MoH PHC centres were more consistent and showed a similar pattern of performance (see table 7.7 in chapter 7).

9.1.8. Items not measured as a scale

Study findings suggested most respondents were satisfied with current working hours and were able to see their usual doctor or any doctor in the PHC centre on the same day. However, respondents' desire for additional working hours was influenced by their sector (e.g. those in the military sector demanded much earlier working hours).

Findings show the average waiting time for MoI respondents was between 6-10 minutes compared with 11-20 minutes for MoH respondents. In contrast, MoH respondents were likely to access their usual doctor or any doctor faster than MoI respondents. MoH respondents appeared to have higher expectations than MoI respondents, as although they were able to access doctors faster, they were less satisfied with current speed. This may be due to military personnel being less willing to complain about services' provision by their employing sector.

9.1.9. Sociodemographic variables

To assess the influence of sociodemographic variables on the evaluation of quality between the two sectors, scores for each quality scale were adjusted for sociodemographic variables, and results indicated that MoI and MoH respondents' views on quality differed statistically in three areas: communication with doctor, doctors' knowledge of the patient, and overall satisfaction.

In order to assess the influence of respondents' sociodemographic variables and their overall satisfaction with quality of care, two analytical procedures were carried out. First, univariate analysis indicated that for MoI respondents, only three variables were associated with overall satisfaction: gender, civilian employment, and overall health status. Multivariate analysis revealed marital status to be the only highly significant variable after adjusting for other confounders.

For MoH respondents, univariate analysis pointed to five sociodemographic variables highly associated with overall satisfaction: age, gender, education, employment civilian, and transport methods used to travel to PHC centres. However, multivariate analysis revealed three variables remained highly associated after adjusting for other confounders: age, gender, and transport methods.

9.1.10. Results for objective three "To explore the views of doctors working in PHC, health service managers, and senior policymakers on the quality of PHC, and compare them with those of patients"

This objective was achieved by analysing and comparing data derived from qualitative interviews with patients and key informants' views on quality of care. Analysis revealed no consistent or dimensional concept or definition of quality appeared to unite different perceptions expressed by either patients or key health care informants participating in this study. Diverse views on quality were found to influence different interest groups' prioritisation of quality attributes. The following section elaborates further on findings.

9.1.11. Definition and attributes of quality

Patients visualised quality through a multiple lens of lay experience, expectations and perceptions. Patients differed regarding their views and definition of quality. Some viewed quality as a whole package, comprising many different components, while others equated quality with structural issues of care, such as the attractiveness and cleanliness of buildings, adequate equipment, and suitably qualified staff and doctors in particular. Another group linked quality to process of care activities, such as a 'harmonious organisation' in which the primary care team works in a cooperative way to produce quality. Others viewed quality in terms of the desired outcome of care, such as speedy recovery and disappearance

of symptoms. Some viewed quality in terms of achieving predetermined objectives which they set prior to visiting the doctor. Thus, it can be concluded that quality from the patient's perspective is a diverse concept and is not conceptualised or defined in a unified way.

As regards key health informants, although they more precisely defined and conceptualised quality than patients, they were more in agreement on the importance of quality in health care policy than on a unified concept and definition of quality. For instance, most policy makers gave less weight to defining quality as a patient-centred approach than to the application of quality in terms of efficiency, clinical effectiveness, monitoring and control, and outcome improvements, reflecting a dominant managerialist attitude to quality in health policies. Service managers and doctors also diverged in their views on quality. For example, PHC service managers emphasised medical compliance and teamwork communication while doctors viewed quality in terms of their relationship with their patients and consultation issues. Therefore, different interpretations of quality were found to be related to the mechanisms in which health care top-down policies are processed and implemented. Key health care informants also pointed to a number of obstacles facing Saudi primary health policies (e.g. management, financial, human, see section 8.2.2 in chapter 8).

9.1.12. Important attributes of PHC service quality

Supporting the premise that quality is multidimensional, this study demonstrated that quality attributes are prioritised differently by patients and key health care informants. For instance, health care informants regarded the availability of sufficient doctors to ensure patients' access to services an important aspect of quality. Patients were more concerned about the quality than the quantity of doctors (e.g. qualification, same gender, longer consultation time, addressing psychological needs). Health care informants' sophisticated knowledge informed quality's dimensions and prioritisation. The literature on

patients' views on quality attributes[18,19,26,28,71,177,209] shows that quality from the patient's perspective typically includes a range of issues related to accessibility, clinical and interpersonal concerns.[18-20,136,177,233] Although Saudi revealed consistency with what is already known about patients' perspective on quality, they additionally spontaneously emphasised four aspects they regarded as imperative for PHC quality, namely, cultural and religious aspects of care, the psychological aspect of care, organisation of services[a], and community participation.

9.1.13. Results for objective four "To explore the extent to which doctors working in PHC, health services managers, and senior policymakers take patients' views about quality into account when making decisions about PHC services"

This objective was achieved by analysing responses derived from face-to-face semi-structured interviews with key health informants. The data collected was richly informative and helped to shed light on the current mechanism and broad attitudes of doctors, PHC managers, and policymakers towards taking patients' views into account when making decisions about PHC services. Analysis revealed there was consensus among all key informants interviewed of the importance of patients' role in PHC services. Although they had different perspectives on why patients' views should be considered, almost all key informants were adamant that patients should be involved in all levels of care. Most doctors thought involving patients was important for medical compliance and continuity of care. Managers felt that regarding patients as customers and eliciting their views are essential for any quality programme and important for accreditation. Policymakers, however, a took middle view between doctors and

---

[a]An umbrella term for a number of issues, such as availability of medication, organisation of waiting rooms, availability of specialist doctors, such as paediatricians, and the cleanliness and tidiness of PHC centres.

managers since they thought patients' views important for quality and medical outcome and, also, as (P2) indicated, important for continued support of the government, because patients are citizens and their views should be listened to and addressed.

Despite expressed support for patients' role in policy-making, study findings revealed a mismatch between rhetoric and reality since involving patients in PHC policymaking is not high on policy makers' agenda.

Data reported in this study as well as the review of current governmental health care policies suggest no systematic approach for eliciting patients' views is currently operating in PHC services in Saudi Arabia. Most existing approaches to tapping into patients' views are likely to be individual initiatives or tokenistic policies.

In discussion of current methods for obtaining and processing patients' views, informants pointed to a number of methods currently existing such as suggestion boxes, research, direct contact with managers, policymakers and even the Minster of Health, as the open door policy is a familiar feature of Saudi culture. Other methods include the media (in the form of complaints or suggestions to local newspapers, etc.) and expressing views to members of health friends' committees.

Analysis suggests that views submitted are not automatically considered by either health care professionals or managers unless they feel they are applicable and, most importantly, they have the power and authority to address them. If accepted, informants revealed that views submitted are processed in an organisational hierarchy, starting from doctors to managers and so forth.

Informants pointed to two broad areas which can be seen as obstacles to patients' greater involvement in Saudi PHC services: administrative obstacles and the culture prevailing within the health organisation. Under the first were cited managerial deficiencies (i.e. ineffective time management and lack of

communication within the PHC team due to language barriers, one way communication with higher levels, centralisation, bureaucracy); resource constraints (funding issues, increased health care cost and demand on access); health care workers' fear of patients' complaints and being abusively treated by patients, doctors' defensive attitude towards patients; and doctors unable to give patients sufficient consultation time due to their heavy workload.

Findings also revealed that the culture prevailing within the health organisation does not support a patient-centred approach to care. Informants pointed to a number of possible explanations but a salient theme which emerged from the analysis was that the medical model adopted gives low priority to patients' role. Doctors trained under this model are likely to adopt a paternalistic approach and their patients may become dependent on such a model and not want it changed. Key informants interviewed, particularly PHC managers, felt such a situation had been imported to the Saudi PHC system from foreign doctors working in Saudi Arabia whose training background had been the Western medical model which does not accept the concept of patients' participation and hence shared decision-making.[33]

9.2. STUDY LIMITATIONS

No study is free of flaws, therefore, researchers strive to be cautious and take appropriate steps to minimise the impact of sometimes inevitable limitations. In any study, the research will encounter difficulties and barriers at some time during the research process. For instance, this study was conducted by a single researcher with limited time and resources and involved travelling between two countries (the UK and Saudi Arabia). Moreover, Saudi Arabia maintains a segregated culture in all aspects of life, and such a culture made it difficult for the researcher to gain access to female health care sections. Further, this study focused on six PHC centres operating under strict military regulations which

necessitated extensive pre-arrangements before access was granted. The above factors may have, to a greater or lesser extent, affected the quality of this study. Listed below are the main observed study limitations:

Qualitative interviews with key health informants

- Purposive sampling of health care informants was limited and hence views of key health care informants interviewed in this study may not have reflected other health care professionals' views.
- To achieve a more balanced comparison of the views of doctors/PHC service managers/ policy makers with patients' views, it would have been appropriate to survey the former rather than rely solely on interviews to elicit their opinions. Due to constraints of time and resources, qualitative interviews with key health informants as a stand-alone strategy was considered sufficient and also because of the exploratory nature of this research.

Quantitative findings/ generalisability

- This study examined MoI and MoH patients' views on the quality of PHC services and caution should be applied before generalising the results of this study to other governmental or private sector PHC services.

Accuracy of response rate

- This study achieved a 91.3% response rate[a]. However this figure should be viewed with cautious. First, it is difficult to assess exactly what the

---

[a] As regards the response rate, it was increased using several techniques, including close supervision of distributed questionnaires. Direct contact with patients enabled the researcher to develop feedback from participants. Another important circumstance which helped to increase the response rate was the fact that all receptionists and nurses involved in assisting the researcher during questionnaire administration were highly motivated and extremely cooperative. The researcher obtained letters from high-ranking officials which crucially facilitated access and elicited the needed support. The researcher offered participants,

response rate was for the questionnaire because the researcher did not know how many patients attended PHC centres during the study time frame. Although the researcher knew what proportion of patients given a questionnaire returned it, he did not know how many patients were not given a questionnaire. Because receptionists were extremely busy booking and processing patients' appointments and queries as well as gathering files for doctors, the researcher did not want to add to their workload by asking them to make a record of the number of patients who refused to participate in the survey. It could be argued that response rates differ from one society to another. For instance, studies conducted in Arab societies have shown a higher response rate compared to those conducted in Western societies. For instance, in a study by Margolis et al.[342] about patient satisfaction with primary care in the United Arab Emirates, the response rate achieved was 95%. In fact, other studies have apparently achieved a 100% in response rate.[343] It is not clear, however, what are the

---

who could not complete the questionnaire at the centre, the option of completing it at home, putting his contact details on the covering letter attached to each questionnaire. He also supplied each participant in this study with a ballpoint pen to use to complete the questionnaire and to keep should s (he) want to or to return to reception staff. In his covering letter, the researcher expressed his gratitude to participants for their willingness to take part in the study, and offered them, as a gesture of his appreciation for their cooperation, the chance to enter a draw to win a mobile phone. The researcher asked participants to write down a contact number in the allocated box on the first page of the questionnaire but urged them not to write down their names to avoid bias when the draw was made. This technique, which has been used in the UK (See example http://www.survey.bris.ac.uk/2003/postgraduatequestionnaire. Students who completed the questionnaire were offered the opportunity to enter a draw with a prize of £100), was very useful and helped to dramatically increase the response rate as evidenced by the fact that the vast majority of respondents wrote down a contact number in the designated box. The researcher later arranged a small party where an individual completely independent of the research project picked a number between 1-950 and the winner was contacted and given the prize. The researcher noticed that a very small number of patients (around 7) refused to complete the questionnaire because the covering letter had the University of Bristol's logo on it. The logo incorporated a crucifix shape and some very devout Muslims expressed some reservations about it (the university now has a new logo - it did not of course change its logo because of this study!). Although this issue was very marginal and did not affect the study in any way, it does nevertheless illustrate the importance of being aware of cultural issues and how a researcher must be alert to such sensitivity.

real reasons for such differences between nationalities. Algaman observed in his study in Saudi Arabia, that "No mass consumer surveys are carried out, unlike in the West, with its plethora of public opinion surveys" (Algaman, p.152[50]). Algaman's comments are echoed by Fulcher and Scott who confirmed that survey research is becoming an increasingly familiar feature in the West. They argue, "Most people nowadays are familiar with surveys. The person with the clipboard is almost a fixture in high streets across the country. Thanks to opinion polls and market research, almost everyone is likely to have been stopped in the street or approached at home"(Fulcher and Scott, 76[344]) . This may be the reason why people are less motivated when approached to participate in a study survey. Another reason may be the Arab's altruism and willingness to help and support others.

Timing

- The study was conducted in the summer when patient numbers are likely to be more evenly distributed throughout the week. PHC centres are busier and more crowded in winter. Patient dissatisfaction with services may have been lower during the time of the study and findings may not present an accurate assessment of year-round satisfaction level.

Sampling

- The study survey tool was distributed by PHC centres' nurses and receptionists to respondents using a consecutive patient sampling technique. Although this type of sampling has been used by the GPAS in many published papers,[283] such a sampling technique may attract bias as there is the possibility for a potential respondent to be skipped or denied the opportunity to participate in the study, due to receptionists' or nurses judgement or prior experience of him/her as 'difficult' or 'unpleasant'.

- In order to maintain efficient and unbiased administration of questionnaires and to ensure that the protocol required was adhered to, the researcher personally attended each sector's PHC centre on distribution days. In order to make this task manageable and cost effective, a strategy was used to administer the study instrument to respondents in MoI PHC centres and MoH PHC centres on alternative days, for instance, MoI PHC centres on Saturdays, Mondays, and Wednesdays and MoH centres on Sundays, Tuesdays, and Thursdays (working days in Saudi Arabia for the health sector are from Saturday to Thursday). However, the decision to distribute questionnaires between the two sectors on different days may have affected the study outcome. For example, on Saturdays (the beginning of the week in Saudi Arabia) more patients are likely to attend after the weekend closure and therefore experience longer waiting times and have a more urgent need to see doctors. These factors may have influenced their satisfaction levels. Despite this concern, PHC centre records reviewed by the researcher with receptionists and nurses suggested no significant differences between patients' visits on remaining weekdays. It was also clear from PHC centre records and receptionists' experience that seasonal change, such as the beginning of the winter, have an impact on the number of patients visiting centres. Nevertheless, the number of GPs at centres remains constant throughout the year as almost all GPs working in MoI and MoH PHC centres are on permanent contracts, thus, despite increased patient numbers, services' provision remains consistent.

- The questionnaire was distributed to respondents in MoI and MoH PHC centres on alternative days. The days should have been allocated to sites in both sectors so that an equal number of Saturdays (for example) were studied at both MoI and MoH centres. To rectify this mistake, if conducting this study again, the researcher would have undertaken a retrospective formal analysis of satisfaction levels by days of week to see

whether responses varied on different week days and included findings in the results section in chapter 7.

Survey

- The study used a survey instrument which captured a 'snapshot' of patients' views on the quality of services at the time of the research. Patients' views may not always remain constant and may change over time.

Comparison with the UK benchmark

- Using a UK benchmark to draw comparisons between Saudi and UK findings may not have produced accurate comparisons given the different perceptions and expectations between patients of the two countries.

Cluster analysis

- Accounting for the clustering effect resulting from sampling being at the PHC level rather than the individual level was important to provide an accurate estimate of patients' views. However, cluster sampling also requires a sophisticated cluster analysis procedure. Most advanced cluster analysis techniques require a large number of clusters (PHCs) to allow such tests to detect precise estimates. This study lacked the minimum number required by most of these tests, which is around 20 clusters per arm.[292] Ideally, random effects multilevel clustering tests, utilised in this study, require at least 20 clusters. However, the MoI has only 11 PHC centres in Riyadh city (PHC centres located in prisons are not included), 5 of which are based in high security areas and public access is restricted. Thus, only six PHC centres under the MoI could participate in this study. An equivalent number of PHC centres under the MoH was randomly chosen. Therefore, the total number of clusters in this study was 12. Results may have been different if the number of clusters had been higher.

With large numbers of primary care centres, cluster analysis (e.g. GEEs or random effects) gives equivalent estimates of the effect and its standard error for normally distributed outcome data. For a small number of PHC centres, as in the case of this study, one approach may well be better than the other. With both methods, a small number of clusters (PHCs) may affect the precision of these methods as the estimate of the between-PHC variation will be imprecise. Further, Donner and Klar (p.100[289]) note that for fewer than 10 clusters within each arm (a sector in this research) of a study, most statistical methods will be unreliable for binary outcome. Donner and Klar pointed to similar findings for continuous outcome data, because between-PHC variation is very difficult to estimate when there are so few clusters for there to be variation between.[324]

9.3. HOW THE RESEARCH FITS WITH AND BUILDS ON THE EXISTING LITERATURE

9.3.1. Assessment of patients' views on quality

Understanding aspects of care that patients view as a priority of care is important for many reasons not least because patient prioritisation of care likely shapes and influences their views, satisfaction and evaluation of care.[11] However, it appears there is no consensus in the literature regarding a 'fixed' list of aspects that patients tend to value most. Wensing et al. acknowledged there is wide variation in published studies about aspects included to measure quality of care and one implication of this is a study's ability to be comparable to other studies.[11] Typically, there are two broad domains that appear to cover most aspects of care measured in the literature. These are, according to Bower, access to care (availability and accessibility of the service), and effectiveness of care, which is further divided into two major components: quality of clinical care, and quality of interpersonal care.[26]

The present study's findings derived from preliminary interviews with patients revealed Saudi patients are no different from people from other countries since the GPAS scales covering the two broad domains identified by Bower are important to them as priorities for quality of care. Interviews with patients revealed four other issues are also important aspects of quality of care to patients. These are discussed below:

Religious, cultural and gender aspects of care

A salient theme which emerged from interviews' analysis was the profound importance of cultural and religious aspects to Saudi patients. Although this issue is not directly related to health care services it was viewed by patient informants as the most important aspect of care. This finding was further reinforced by results from the patient survey in that this aspect was ranked by most respondents from both MoI and MoH sectors as the most important aspect of care to them. The researcher as a Saudi citizen was not surprised by this finding, being aware of the powerful position of Islam and its pervasive influence in virtually all aspects of Saudi people's lives. An example is the strict segregation culture embedded in Saudi society and practised everywhere,[a] including PHC centres. This situation highlights the influence of powerful cultural and religious norms and the dilemma that can arise when they cannot be adhered to in order to provide quality of care. A Saudi doctor interviewed in this study (D9) portrayed a picture of how female patients would simply leave his clinic when they realised they were meeting a male doctor instead of a female

---

a Dhami and Sheikh explain that "Islam quite clearly demarcates between legitimate and illegitimate human relationships. Societal laws exist to aid the Muslim in abiding by this framework. Segregation exists primarily therefore to minimise the chance of illicit relationships developing. Physical contact between members of the opposite sex is strongly discouraged, though these rules are relaxed somewhat if medical treatment is required. This framework explains why many will prefer to see a same-sex clinician, particularly in consultations necessitating examination of the genitalia" (Dhami and Sheikh, p. 473[345]).

one. The implication of this dilemma and its impact on the doctor-patient relationship and indeed the whole health care system is indisputable.

This finding accords with other studies from Saudi Arabia. Al-Shahrani (p.252[57]) examined patients' expectations and perceptions in Saudi Arabian hospitals and concluded that "sociocultural-religious dimensions of care have a major impact on patient satisfaction with care". Similarly, Al-Shahri asserted that "Modesty is one of the core values for Saudis. This value is expressed by both genders, though more evidently by females…Islamic teachings forbid unnecessary touching (including shaking hands) between unrelated adults of the opposite sex" (Al-Shahri, pp.135-136[346]).

Psychological aspects of care

Another important issue for Saudi patients was emotional and psychological care. Patient informants wanted courtesy and a thorough medical examination, but also wanted attention given to their psychological as well as physical concerns. In this study, despite evidence derived from interviews with doctors suggesting that some doctors advocate a holistic approach to treating patients, patient informants felt doctors did not give sufficient attention to their psychological needs or concerns, or time to provide background details to their illness.

The importance of psychological aspects of care revealed in interviews with patients was reinforced by findings from the patient survey in which this aspect was ranked by MoI patients as the fourth most important aspect of care and fifth by MoH patients.

Patient survey results indicated that MoI and MoH respondents were relatively satisfied about current performance in respect of psychological aspects of care (mean scores were 67.9, 62.5, respectively). This finding accords with the study of Saeed et al. who reported that overall satisfaction with psychological aspects of care provided by physicians in eight PHC centers in Riyadh city was 59%.[347]

This study's findings are consistent with other studies which have identified psychological aspects of care as important to quality,[13,209,304,348] and some survey instruments have included it, such as the EUROPEP.[303] However, the GPAS survey instrument does not include this dimension for study in the UK[a].

The study findings also suggest that the biological model of PHC identified by Toon and discussed in chapter three is predominant in Saudi Arabia. In fact, the biomedical model of PHC appears to dominate in many countries, including the UK. For instance, Howie et al. indicated that "Current issues about governance and professional accountability…appear likely to confirm the pre-eminence of the 'biomedical' rather than the 'biopsychosocial' model of care, which can help achieve the healthier balance between clinical/technical effectiveness and interpersonal effectiveness that we believe patients as well as health professionals generally want" (Howie et al., p.466[349]).

Studies from Saudi Arabia show that average consultation time in PHC settings is 5.09 minutes,[350] although some authors claim this figure is inflated and consultation time in fact is around 1-2 minutes (Sobae, cited in Algman[50]). In contrast, in Switzerland, the average consultation time is 15 minutes, and 9 minutes in the UK.[351]

PHC is a preventive and community based idea and such a concept extends to include a holistic approach towards treating patients both physically and psychologically. A study from Saudi Arabia (n=789) has shown a strong statistical association between PHC services' utilisation and length of consultation.[73] Saudi patients want to convey their emotional concerns to their doctors but lack sufficient time to do so. Emotional and psychological needs may be of particular importance to some groups of patients, such as military

---

a GPAS in its original version did include some questions about the trust issue between doctor and patient. However, this dimension was omitted from later versions due to low reliability scores.[302]

personnel and their families. Military personnel, due to the nature of their work, are subject to psychological as well as physical trauma. Therefore, the psychological aspect of care was viewed as a particularly important attribute of quality by these patients in the study. The impact of short consultation visits at Saudi PHC centres on patients' satisfaction and attitude is not fully identified by health care professionals. At present, technical and resources' constraints prevent an increase in the time given to patients.

Community participation

As discussed in chapter two (sections 2.2 and 2.6.1), the concept of participation or involvement has been given different meanings in the literature,[352] particularly the motives underlying it, ranging from involving patients generally in their health care (part of the wider democratic framework) to a limited extent only (performance indicators).[33,61,125,353] For the WHO, community participation is a central theme in the PHC approach.[87,354,355] The concept of participation is valued by the WHO not only as a valuable means for empowering people of their rights and duties towards health related matters,[a] but also because participation in health matters acts as a stimulus to wider involvement in debates of democracy and the development plans of the country.[61,96,97,123,357]

Findings from qualitative interviews with patients demonstrated that Saudi patients perceived community participation as an important aspect of the quality of care in PHC services. They viewed participation as a bridge between them and their local PHC centre. Findings were reinforced by results from the patient

---

[a] The literature points to several examples where community participation has made a direct contribution to improve health care outcome. For instance, in their study of Iraqi patients with Tuberculosis, Niazi and Al-Delaimi carried out an experiment by introducing the concepts of community participation and involvement in treatment to one group of patients. They found that cure rate in the intervention group was 83.7% compared to 68.6% in the control group. They also found that compliance rate was 100% in the intervention group compared to 14% in the control group.[356]

survey which revealed that random effects tests and stepwise regression indicated that community participation was a key determinant of quality of care and found to be significantly associated with respondents' overall satisfaction with service quality in both sectors (see table 7.24 in chapter 7). These results accord with what Al-Mazroa and Al-Shammari found in their study in the Qasim and Hai'l regions in Saudi Arabia, where 96.2% (n=1163) of males and 95.3% (n=1153) of females viewed community participation as important to them.[358]

Interestingly, this study found that patient survey responses indicated that community participation was ranked as the least important aspect of service quality by both MoI and MoH respondents (see tables 7.26 & 7.27 Chapter 7). Further statistical analysis also indicated that community participation in both MoI and MoH PHC centres was conclusively viewed by patients as the least satisfactory aspect of care (mean 54.1, n=424) and (mean 46.1, n=437), respectively.

This finding suggests that community participation was viewed by respondents in relation to: its importance and its current existence.

Respondents' paradoxical views on community participation seem to suggest they viewed community participation as the least important aspect of quality and other aspects as more important because other aspects are more directly related to their health, wellbeing, and cultural concerns. They likely ranked the issue of community participation as less important because they had not fully understood the abstract way the statement referred to community participation as a concept (question 27, see appendix L). By contrast, they better understood questions under community participation as a scale (questions 25, a, b, c) because it contained more details about the issue. Those patients who had little knowledge of the concept of participation would therefore be confused with a less detailed presentation of it.

Organisational aspects of care

Another important aspect of quality of PHC care identified by patients was the organisation of services, an umbrella term for a number of issues, such as availability of medication, organisation of waiting rooms, availability of specialist doctors, such as paediatricians, and the cleanness and tidiness of PHC centres. Qualitative interviews with patients supported patient survey results, MoI and MoH respondents ranked organisational aspects of care as their second most important aspect of care. Regarding current performance of MoI and MoH sectors, results showed patients from the two sectors were relatively satisfied with organisational aspects as their mean scores were 65.2 and 58.1, respectively.

In-depth interviews with patients revealed that complaints about lack of medication and interviewees emphasised that quality of care cannot exist without quality medication. All Saudi PHC centres, in both MoI and MoH sectors, are equipped with a small pharmacy with essential drugs in stock. Doctors prescribe medication and patients attend the pharmacy at the PHC centre and claim medication free of charge. Recently, however, the number of patients has increased dramatically, according to a senior policymaker interviewed in this study (PM1). Patients make around fifty million visits to MoH PHC centres every year. Interviewed patients reported they had noticed the quality and quantity of prescribed drugs had decreased. A possible practical solution is that practised in the UK. British patients obtain their medication from commercial chemists or drug stores through a subsidisation scheme whereby they pay a fixed amount (currently £6.20 in England) and the NHS pays the remaining amount. In certain cases, for example, pregnant women or the unemployed, patients do not have to pay for their medication and the fee is waived.

In Saudi Arabia, the government has decided to rationalise medication purchases and patients have reported a decrease in the quality of medication, possibly because the government is purchasing cheap brands, etc. Professor David

Mechanic (in a formal address to the Health Medical Research Council at Bristol University in December, 2004) pointed out that explicit rationalisation of services (in this case medication) is likely to be associated with patients' distrust of services and therefore dissatisfaction.

Regarding the physical appearance of PHC centres, patients considered this an issue of quality because current rented or old PHC centres are not intended to be PHC centres and lack facilities for the disabled, such as elevators. The issue of organisational aspects of care was added to the GPAS survey used in this study.

9.3.2. Comparison between different sectors as providers of PHC

Regarding patients' evaluation of current PHC service quality, the study found most Saudi patients were moderately satisfied with the overall quality of PHC services (mean scores for MoI and MoH sectors were 69.1, and 59.2, respectively). This finding is consistent with other studies conducted in different settings in Saudi Arabia, such as those by Mansour and Al-Osimy;[69] (79.5%, n=229) Saeed et al.[347] (75.4%, n=540), and Al-Shabrawy.[359] Al-Doghaither and Saeed found 75.2% of patients (n=300) were satisfied with the overall of quality of PHC services in Jeddah city in Saudi Arabia.[360] However, MoH patients were less satisfied than those from the MoI sector since their mean score for overall quality of care was 59.2% (n=441). No previous research comparing the two sectors appears to have been carried out.

Regarding comparison of MoI and MoH sectors in terms of individual PHC centres, findings imply that level of performance variation between PHC centres under the MoI is greater than PHC centres under the MoH.

Results for individual MoI PHC centres indicate that respondents from King Fahad Security Forces Academy (a police academy) were the most satisfied with PHC services (mean= 91.5), followed by Public Security Training City respondents (mean = 79.7), and Border Guard Institute respondents (mean= 66.9). These results may be attributed to the fact that all these PHC centres are

based in military education institutes and the vast majority of their patients are military cadets who reside inside these premises from Friday to Thursday and return to their homes over the weekend. PHC centres in these military institutes extend their services to academic staff and military trainers and their families who reside inside villas and flats located within the vicinity of the centres. Thus, these centres serve a much smaller population than other PHC centres. Table 5.4 (chapter 5), support this assumption since these three centres are the least visited compared to other MoI PHC centres. Table 5.4 also shows that King Fahad Security Forces Academy PHC receives more patients than two other PHC centres. This may be due to the fact that military cadets are more subject to injuries because of the nature of military exercises and therefore make more frequent visits to PHC centres than other groups. Another possible explanation for high satisfaction with services provided by these PHC centres is that more attention is given to patients in them because they are not allowed to go outside for medical treatment and the PHC centre is therefore solely responsible for their welfare.

In contrast, patients in the other three MoI PHC centres, namely, Border Guard HQ, the Security Forces Hospital PHC centre, and the Special Forces PHC centre were least satisfied with overall quality (means= 52.6, 59.3, and 64.3, respectively), possibly explained by the fact that the Border Guard Headquarters and Security Forces Hospital PHC centres serve larger populations than their counterparts. Further, together with the Special Forces PHC centre they are located within military headquarters where employees attend PHC centre during normal working hours only and have to access other services (e.g. Emergency & outpatients or private clinics) if the need should arise at weekends.

Another way to look at possible reasons for respondents' satisfaction/dissatisfaction is by looking at other aspects of care. For instance, in PHC centres where respondents' overall satisfaction was low, results showed they rated organisational aspects of care as low, because organisational aspects of

care include the cleanliness, comfort, and organisation of waiting areas which are affected greatly by patient overcrowding. The quality of continuity of care, interpersonal care, and nursing care is also affected by overcrowdedness.

Sociodemographic characteristics between different populations

There is consensus that satisfaction is multi-factorial and patients' sociodemographic variables comprise one factor.[73] However, the level and weight of the impact of patients' background sociodemographic variables on their level of satisfaction is not clear. Many commentators, such as Hall and Dornan;[332] Fox and Storms,[361] argue that the literature in this area is 'completely' inconsistent. This has led Weiss (cited in Al-Qatari and Haran[73]) to emphasise that patients' sociodemographic variables are among the most difficult to relate to the level of satisfaction. The present study found respondents' sociodemographic variables in the two sectors differed significantly. The impact of such differences was evidenced by random effects tests which showed high statistical differences in MoI and MoH patients' views on three quality attributes. However, the same tests showed little or no significant influence of sociodemographic variables on the responses of respondents in the same sector. In other words, respondents from the same sector were likely to share analogous sociodemographic characteristics which contributed to their similar perceptions of health care services quality. According to Hall and Dornan,[332] apparent differences may not be real and may disappear if more studies are located or conducted.

Regarding the association between MoI respondents' sociodemographic characteristics and their overall satisfaction, this study found they had very little impact on their overall satisfaction. Nevertheless, respondents' age seemed to have some influence on their satisfaction (i.e. older patients were more satisfied than younger patients), though the aggregated age value was not significant. Respondents' gender and overall health status were the only variables to show a statistically significant association with overall satisfaction with care (p-values

were 0.021 and 0.0003, respectively). Despite univariate regression suggesting an association between patients' gender, i.e. female patients were more satisfied than male patients, after adjusting for confounders (e.g. age, education, etc.), respondents' gender was not statistically significant. Nevertheless, the overall health status variable remained statistically associated with overall satisfaction, even after adjusting for confounders.

The above findings reflect differences found earlier in this study in respect of gender, age, educational level, military and overall health status. Female respondents were more satisfied in both sectors than their male counterparts, possibly because their dependant role made them less willing to openly express criticism. Older respondents in the MoI were more satisfied than those in the MoH, possibly because of their more secure access and reluctance to criticise the sector employing them. Better educated respondents were less satisfied in both sectors. Highly educated patients are likely to be more demanding, knowledgeable, aware of developments in the field of health care in general and in Saudi Arabia in particular, due to their wide contacts and travel opportunities. Moreover, the higher the patient's military rank the less satisfied he was with PHC services, possibly due to the reasons given above and also his lack of fear of voicing criticism.

In both sectors, the poorer the patient's overall health status, the less satisfaction with services, possibly because such patients tend to visit PHC centres more frequently and experience longer waiting times and lack of available medication (particularly for chronic illnesses such as diabetes). Main differences with regard to quality of services between sectors may have been due to the nature of the MoI itself. It is responsible for providing and maintaining the nation's security forces, therefore, its personnel are likely to receive better, more up-to-date provision of care than other sectors of the society. Further research may be needed to examine the influence of sociodemographic variables in both sectors in greater depth. This was not the main focus of the present study.

In short, the above findings are consistent with what is already known in the literature about the association between patients' sociodemographic characteristics and satisfaction with health care. Hall and Dornan conducted a meta-analysis study to examine such an association and concluded that "in general, relations were extremely small even when statistically significant. Sociodemographic characteristics are a minor predictor of satisfaction, at best"(Hall and Dornan, p. 816[332]). In fact, some commentators have gone further and argued for a dismissal of sociodemographic characteristics as predictors of satisfaction (Fox and Storms, cited in Hall and Dornan[332]). Recent studies have also reached a similar conclusion, suggesting that differences between male and female patients are always by definition subjective.[17]

9.3.3. Health care professionals' views on quality versus patients' views

It is well documented in the literature that different interest groups have different views and interpretations of quality.[24,28,68,165] This study likewise found different informants' groups possessed different perspectives on quality definition and attributes. Ovretveit asserted that evaluation of quality very much depends on the perspectives and targets of the evaluator.[31] This study illustrated different groups (patients, doctors, PHC service managers, and policymakers) had different views on quality and hence evaluated and assessed it in different ways. Policymakers' perspective on quality was shown in this study to be typically managerial-oriented, with the main focus on control and monitoring of cost-effectiveness, etc. whereas doctors tended to focus on the less general issues such as the doctor-patient relationship. PHC service managers focused on teamwork and process activities. In contrast, this study found patients judge quality by comparing their spontaneous perceptions of what they receive to their expectations of what they should receive.

Some informants pointed out that before they went to see the doctor they had a checklist of requirements. The literature in this area indicates that this is particularly important in understanding and controlling service quality. For instance, Moullin suggested that informing patients of likely waiting time might lessen their dissatisfaction with services quality, as patients will adjust their expectations to the situation.[2]

Ovretveit pointed out that although managerial evaluation is important, understanding patients' views enables management to include them in the evaluation process.[31] Many authors argue that a multi-lens approach is far more advantageous than a single approach.[31,31,36,132,362]

9.3.4. Patients' current role in policy and decision-making

Generally speaking, the concept of involving patients in the policy-making process is in its infancy in many developing countries, including Saudi Arabia. Al-Mazroa and Al-Shammari interviewed 27 regional senior decision makers and less than half viewed community participation in service implementation as important.[358]

In the present study, despite key health informants' support of the concept of treating the patient as consumer, evidence suggested that patient are not involved in policy-making and their participation in the decision-making process is limited. The only current means of involving patients in policymaking is through participating in the so-called health care committees. Al-Mazroa and Al-Shammari noted that only 24.6% (n=1296) in rural areas and 18.8% (=1104) in the urban of Qasim (central) and Hai'l (northern) regions of Saudi Arabia were aware of the existence of such committees.

Moreover, the numbers participating on these committees are relatively small, pointing to the need to build capacity in this area. Baggott et al.[363] suggested that for such committees to succeed, more formal requirements may need to be placed upon them, i.e. to be open, accountable, and inclusive, and democratic

health consumer groups must be recognised as full partners in the decision-making process and, in the longer term, be able to 'win' or achieve some of their objectives.

9.4. IMPLICATIONS OF THE STUDY FINDINGS FOR THEORIES OF QUALITY AND PATIENTS' VIEWS

The literature review chapters explored assessment of and improvement in the quality of PHC services and how main interest groups (patients, health care professionals (doctors, managers and policymakers) perceive these. This section discusses the implications of the study findings for theories of quality and theories of patients' views.

9.4.1. Theories of quality

Until recently, health care professionals have been the main arbiters for defining and conceptualising health care quality.[175] However, the desire to enhance accessibility, responsiveness, and performance of service has led to an emphasis on eliciting patients' views on health care services. Because service quality is multidimensional,[28,35,131,164,165,177] a pluralistic approach to evaluation is essential.[28,31,36]

Quality is a diverse, multidimensional concept

The literature in this area of research indicates that quality is diverse and different people, even within the same group, express different views on what constitutes quality.[31,35,131,164,177] Findings in this study revealed health care informants' views on quality differed from those of patients. Moreover, informants within the same group held widely differing views on quality. For instance, despite their agreement on the importance of quality initiatives within PHC in Saudi Arabia, key informants overall did not display a unified conceptual approach to quality. Further, among policymakers, one appeared to

view quality from an outcome perspective, such as increasing life expectancy and reducing mortality and morbidity rates, while another viewed quality from a patient- centred view, in that he regarded quality as "measuring changes in patients' attitude". Policymakers' different stands on the quality concept inevitably resulted in different views of the ideal model of quality. Some maintained that physical and organisational structure as well as doctors' technical competence contributed to the ideal model of quality care. Others pointed to community based services as the key to the ideal quality model. In this regard, community participation, health education, media support, active teamwork, and improving management skills were regarded as key components for achieving the best service quality. PHC service managers emphasised medical compliance and teamwork communication as their priorities for quality and promoting health care research and broadening the use of modern technology (e.g. the Internet) were also important for their ideal quality of care model.

Notably, doctors appeared to be less consensual in their views on quality and discussed it from the viewpoint of their relationship with their patients and consultation issues. Their views can be divided into two groups. One group took a doctor-patient approach and felt good quality·meant ease of access and sufficient time for the medical encounter, particularly important for improving continuity of care and their patients' overall satisfaction. The other group viewed quality as a 'holistic approach' and argued for a "comprehensive coverage of all aspects of the patient's welfare, including social, psychological and physical concerns"[a]. Thus, the study findings confirmed quality is a complex and multidimensional concept. Understanding different stakeholders' views on quality, particularly patients, is important to determine which aspects of health

---

[a] Interviewee (D9)

care quality are most valued by patients and should be prioritised to improve the quality of PHC services.

Service quality is intangible and instantaneous

The success or failure of quality programmes rests to a large extent on customers' use or lack of use of them, or dissatisfaction with services. From this, it becomes clear that the market analogy, particularly in the health care sector, is not simply that of expressing satisfaction/dissatisfaction with services, but should also include involvement in health care quality plans and their evaluation. Understanding patients' views on quality is important, however, what patients demand or want may not be viewed as realistic or important by health care professionals and managers. Exploring the latter's views on what constitutes good quality is therefore essential to understand differences and similarities between the parties. In this study, aspects that were identified by patients as important attributes of quality of PHC care were not accorded the same importance by health care informants. For instance, receptionists' care was not highlighted by health care professionals as an attribute of quality. Similarly, issues regarded by health care informants as important aspects of quality were not seen as such by patients, such as health education and medical compliance. Even issues which they both agreed were important to quality, such as community participation, were viewed differently. For instance, health care informants viewed community participation through so-called health care community friends committees whereas patients considered their role to be limited and demanded 'real' involvement.

The differences in views on community participation may explain respondents' very low scores in the study survey (MoI (54.06), MoH (46.09)). Some health care informants acknowledged that the current level of patients' participation is not sufficient and others argued for an alternative approach, namely, selecting representative patients to participate in quality management committees. There were, nevertheless, occasions when both health care professionals and patients

shared similar views on aspects related to quality, such as sensitivity to gender differences in terms of behaviour in the society and female patients' demand to be seen by female doctors. Key informants appeared to acknowledge the latter demand but attributed failure to meet it to staff shortages and economic constraints. The differing perspectives between patients and health care professionals regarding quality identified in this study support the importance of eliciting patients' views on health care quality and for maintaining quality improvement programmes.

9.4.2. Theories of patients' views

A number of theoretical approaches have been developed to enhance understanding of the distribution of power and benefits within the health care system and where patients' role fits into these activities. As pointed out in chapter four, the most commonly used theoretical approaches according to Baggott et al.[363] are: structural interests, theories of social policy networks and pressure group politics, and normative theories of representative and participatory democracy. Each of these theoretical approaches has varied usefulness for facilitating understanding. For instance, Baggott et al.[363] argued that macro-level theoretical approaches are less helpful for examining specific interaction activities, such as health consumers' operational activities within the wider political system.

Evidence from this study suggests that consumer pressure groups do not exist in Saudi Arabia. Rather, a different concept of purposively elected members of so-called health care friends committees operates, but is unlikely to have both the capacity and will to engage politically.

A macro-level analysis is thus considered more useful in examining bureaucratic and hierarchical organisations, such as the Saudi health care system. Alford's[364] analysis of structural interests groups, in particular, is more helpful within the context of Saudi Arabia where there is ongoing debate between reformists and

technocrats. Although this area of health service policy is lacking scientific research in Saudi, anecdotal evidence, including media reports and newspaper analysis, suggest that the Ministry of Health is facing growing pressure from academics and the government to introduce radical reform and shift towards privatisation of the public health care sector and insurance system. Banoob reported that "most Arab Gulf countries are moving towards expanding health insurance. This approach, although natural can be harmful to the national health system if it is created without careful planning" (Banoob, p.745[365]).

However, as Hunter (p.51[366]) points out, swinging between different health care reforms is viewed by Alford as not only the cause of "reform fatigue" but, more importantly, such a situation is more likely to be a "dynamic without change". Hence, the central thesis for Alford is not what reform is capable of achieving, but how different interests groups react to such reform. The second chapter of this thesis provided a powerful example of how strategic reform can simply fail or be altered and differently interpreted within the system, thereby making it incapable of producing change. The outright rejection of comprehensive PHC initiatives promoted by the WHO is a good example of how powerful interest groups, such as the medical profession, are able to shift the focus from comprehensive promotive care to a clinically selective type of PHC through which the main medical profession can exert and maintain power and social influence. Hence, PHC initiatives, as essentially preventive care, begin to be seen as a failed concept,[81] or as a mere extension to hospitals.

This study found the analysis of different interests groups' views helpful in enhancing understanding of how PHC policies in Saudi Arabia operate. Community participation is a salient example of how the original concept of participation promoted by the WHO is differently interpreted and implemented in the country. Community participation was found to be an important determinant of quality but the one patients were least satisfied with. This demonstrates both the powerful position the medical profession plays in the

policy process, and the marginal role that Saudi patients have in influencing policy.

9.4.3. Implications for methodological techniques

The findings provide convincing evidence of the importance of analysing different interests groups' views on health care for improving the quality of services and setting standards of care. However, the patient satisfaction survey as a prominent tool in eliciting patients' views has been under scrutiny in recent years[23,63,367] on account of its empirical and theoretical flaws.[26,63,64,177,367] Discussion has started to focus on patients' reporting (factual) and rating (evaluative) as more robust report-assessment methods of their views on quality.[177] Robust methodological techniques have been developed to more accurately and precisely measure patients' views. These techniques are:

- Using the qualitative approach to inform questionnaire development.
- Adjusting for cluster effects between individuals in each PHC centre.

The present study applied the above in conjunction with the GPAS as a framework to examine patients' views on PHC in Saudi Arabia. Findings show its applicability to Saudi Arabia and other developing countries with a similar PHC system.

9.5. IMPLICATIONS OF THE STUDY FINDINGS FOR POLICYMAKERS

This study's findings have significant implications for Saudi Arabian health care policies in general and PHC in particular. The findings aim to provide a scientific body of evidence that can help health care policymakers to understand the process of reform from different stakeholders' perspectives. The study findings gain further strength since PHC services are increasingly seen as a solution to a

complex dilemma facing many health care systems around the world. The PHC concept does not require sophisticated technology nor highly qualified health care professionals. Moreover, the PHC concept is preventive in the first place and, as such, plays a major role in easing the burden on higher levels of care. However, despite its promising benefits for health care systems, particularly in developing countries, PHC still generates uncertainty on the part of both health care professionals and patients. In order to understand this, we need to look back to the purpose of PHC.

In 1978, when the WHO and UNICEF announced their intentions to promote the concept of Primary Health Care, it was viewed at the time as an essential solution to remedy failing health care systems. Many countries around the world subscribed to this new approach to health care provision mainly because there were increasing concerns that their existing health care systems, modelled on Western-oriented medicine, were failing to provide the basic needs for large groups of the community.[33] Thus, the announced main target for the new PHC programmes was health for all by the year 2000.[368] Almost three decades on, the WHO has renewed its emphasis on PHC as a valid health care strategy, even for those countries which have achieved the original goal of PHC, like Saudi Arabia. However, the emphasis has been directed to not only a basic coverage of PHC services but to more appropriate and effective PHC services. To achieve this target, the WHO emphasises that responsiveness and treating patients as consumers should underlie PHC policies.

It is at this point that uncertainty about PHC among patients and health care professional appears to have begun. Community participation or patient involvement, which forms a central pillar of the original PHC concept, was originally introduced to allow grass roots patients to become active members in deciding and evaluating their health care. A review of recent studies of patients' involvement in health care indicates the difficulties generated by its introduction. As chapter two illustrated, health care professionals were trained to be objective

and focus mainly on the pathology of ill-health. This produced an image of doctors as superior to patients, because they talk a language that lay patients do not understand and they have a cure for everything.[33] Patients become accustomed to such an image and the idea of doctors as unquestionably authoritative persons becomes a fact embedded in their minds. With regard to PHC settings, the concept of community participation was not popular among doctors possibly because the proposed redistribution of power was viewed as a threat to their professional standing.

Perhaps this concept is in its infancy and still vague for patients who are uncertain how to use their new entitlement, and particularly so people, such as those in Saudi Arabia who find it difficult to link such an abstractly expressed term to their own culture and experience. Both doctors' and patients' uncertainty about community participation has resulted in a PHC service being mainly regarded as an extension of hospital services. From this point, involving patients in health care becomes a dilemma. The evidence from this study suggests that community participation in MoI and MoH sectors rarely exists. A simple question is why not? The following section will try to answer this question through the study findings and their implications.

9.5.1. Patients' awareness of the concept of PHC

Generally speaking, Saudi patients are accustomed to a hospital-focused type of health care provision. The types of services offered at PHC centres differ from those provided in the hospital setting, in terms of facilities and doctors' qualifications. Some respondents who participated in this study reflected this fact since they viewed PHC services as being provided for treating minor and trivial matters. Patients with such an attitude may visit PHC centres with little confidence in the services provided by doctors and may simply ask for referral to a hospital. Health care professionals, on the other hand, have shown little or no

effort to change such an image because such effort involves talking to patients, which means sharing power with them.

Health care professionals, mainly doctors, are not trained to do so, and even if they wanted to, they lack the time. This problem is amplified by additional factors, such as doctors' nationality which may present communication problems if doctors are non-Arabic speaking, and doctors' training background in that some may come from countries where the medical education system does not support patient-centred care or community involvement. Other factors are also at work. A transfer from the expensive hospital system to the much cheaper PHC system is a threat to doctors because it means moving money and power from "important" health professionals to less highly trained non-specialists. Hospitals are symbols of power for doctors but they are also impressive flagships that politicians can be proud of.

9.5.2. Key informants' attitude to community involvement

At the macro level, study findings showed that the concept of participation is perceived differently by health care policymakers and PHC managers. Key informants' accounts provided evidence of the complex and highly bureaucratic nature of the health care system. A bureaucratic type of management and decision-making process within the health care system makes it difficult for a concept such as community involvement to become embedded in the system. Although key informants indicated that a series of transformations had taken place to address changes in patterns of mortality and morbidity in Saudi society, this further confirmed the assumption that PHC services are driven by health care professionals to provide curative and preventive types of care as extended services to the hospital, ignoring PHC centres' role as independent providers of services within the health care system. Thus, patients' views are marginalised and patients themselves become used to a passive and dependent role. The reasons for such a culture have both historical and political roots.[60]

It is important to emphasise that community involvement in health care is likely to remain crucially important to the success of PHC, not only because of the growing consumerism trend and demand for responsive care, but because these concepts are essential components of a quality service which, in turn, produces satisfied and cooperative patients. For instance, chronic diseases like diabetes, and medical problems, such as high blood pressure and cholesterol, have serious medical consequences for both patients and the health care service. A patient with any or two or more of these medical problems is at risk of further health complications if s(he) does not receive an early diagnosis and treatment.

Deficiencies in the health care system may result in patients with these problems having to have expensive hospital intervention in the future. Thus, the PHC centre, because it provides ongoing care, is the right environment for detecting patients with chronic illness and treating them. However, for PHC centres to be able to achieve this role effectively, cooperation with higher levels of care and patients needs to be established.

The study findings also show that patients have priorities as regards PHC. Therefore, policymakers should take their views into consideration in the decision- making process. Moreover, patients' views should not only be used to implement and evaluate services but also be taken into account when setting standards and targets for PHC services' quality. Additionally, because involving patients in their health care is recognised as important, identifying the level of such involvement should be a matter of priority.[125] Patient satisfaction was also shown to be highly correlated with several different aspects of care rather than patient sociodemographic characteristics. A reform of PHC services should typically include a review of PHC centres' management of health care and their boundaries of authority. In addition, if the concept of consumerism is to be visible and active, the bureaucratic policy has to be reviewed as consumerism is a market oriented concept and its success is likely to be limited within the framework of bureaucratic management.

There was consensus among health care informants as to the importance of treating patients as consumers and listening to what they have to say. However, there appears to be no existing law or legislation specifying a mechanism for implementing patients' views in the Saudi health care system. Although health care informants showed an understanding of patients' views and what patients can offer to improve services, their views were mainly based on their work experience and academic knowledge of what constitutes the patient's role in general, rather than government regulation or guidelines to enforce such an approach.

In the UK, for instance, when the NHS introduced initiatives to reform health care services and make them more accountable and responsive to patients' needs, the decision was taken at the highest government level and transformed into manifesto and law.[369] In the Saudi context, health care workers, doctors, nurses and PHC managers attend academic training courses which draw their attention to health care ethics and patients' role and rights. However, because a law is lacking to enforce these concepts, the interpretation of these issues in day-to-day health care activities varies from one person to another, as interviews with key health informants revealed. Some took patients' views on quality into account only if patients appeared to be realistic in their demands and aware of differences between PHC centre and hospital care, while others welcomed their views unreservedly. For instance, one group of informants argued that patients lacked awareness of the concept of PHC and its preventive based nature mainly due to their inherited hospital-oriented attitude. As a consequence, this group of health care informants argued for more health education to raise the level of community awareness of the concept of PHC to enable both health care workers and patients to share a common understanding of it.

The other group of health informants appeared more open to taking patients' views into account in the decision-making process. Nevertheless, they appeared to view their involvement from a collectivistic rather than individualistic basis.

Despite different attitudes towards implementing patients' views in the decision-making process, informants outlined a number of methods that exist within PHC services to elicit patients' views but not necessarily implement them. Examples include suggestion boxes, fieldwork and health research, national census, complaints published in local newspapers, and Health Care Friends Committees. The latter was, however, viewed as mere tokenism because selected members do not always represent their communities and rarely criticise or interfere in predetermined health care policies.

9.5.3. Obstacles to taking patients' views into account in the decision-making process

Following on from the previous section, which has outlined conditions attached to policy-makers addressing patients' views, this section consequently discusses obstacles to taking patients' views into account. Those who took patients' views into account conditionally and those who openly took patients' views into account but within the broader framework of community participation rather than on an individualistic basis seemed to share some agreement regarding existing obstacles to implementing patients' views. These obstacles vary from financial constraints and lack of resources to limited authority and lack of tactical decisions at the PHC level, and appear to be generated from the strict centralisation policies that are a distinct feature of many bureaucratic systems, such as the Saudi health care system. A further obstacle indicated by key informants was fear of listening to patients' views because they may express complaints or criticism. It was less clear, however, whether this extended to include fear of the higher authority since disclosure of patients' views might cause problems in PHC centres. This problem would be diminished if there was clear government support for taking patients' views into account and implementing practical steps towards translation in the decision-making process. Without this support, the situation will remain vague for both patients and health care professionals.

It is commonly recognised that implementing a successful quality improvement programme requires many important steps but, most importantly, managerial determination and belief. Ovretveit has been among several commentators to closely observe cultural and traditional barriers to successful implementation of such programmes. He notes that strong traditional management beliefs, quickly rule out any changes viewed as a threat to existing power structures:

> *"As one of a number of quality experts working in developing countries, I have been challenged to propose appropriate strategies. In Arabic culture, with different management traditions, I have been forced to recognise how much quality methods presuppose an attitude, way of working, and certain management processes. The relation between the Ministry of Health and local districts, ruled by tribal leaders, is more one of negotiation than direction. Introducing quality systems also means introducing management processes which challenge the existing power structures and culture and are quickly rejected. In many such countries, but not all, multidisciplinary improvement teams do not work because traditional authority structures or team approaches have to be adopted for the culture. Some might say this is also true of the West" (Ovretveit, p.301 [370]).*

Similarly, Dawson and Heyman argue that cultural and organisational barriers have to be taken into consideration in order to ensure a successful quality evaluation process:

> *"There are many cultural and organisational barriers that have to be overcome for evaluation to be successful and meaningful. If these barriers are underestimated or ignored, the quality of evaluation is compromised" (Dawson and Heyman, p2.55 [371])*

9.6. UNANSWERED QUESTIONS AND PRIORITIES FOR FUTURE RESEARCH

The kingdom of Saudi Arabia is a rapidly expanding nation and the level of scientific research in many aspects, including health care, needs to be improved to respond to that growth. This study has filled a gap in the quality research

literature. However, there are important questions this study was not able to explore in depth as follows:

- To what further extent do sociodemographic variables in military and non-military sectors differ and what are their influence on perception of service quality?
- What are the barriers to the future involvement of Saudi patients in their health care and what motives are present in MoI and MoH sectors preventing this general involvement?
- Is it possible, given the population expansion, for the Saudi Arabian government to benefit from other countries' experiences? Given present policies would the UK NHS subsidised medication scheme prove to be of future economic interest?

9.7. RECOMMENDATIONS

Because of the importance of cultural customs and religious beliefs, the doctor-patient relationship, consultation time, a well-organised appointment system, research, and patients' education found in this study, the following ongoing measures could enhance primary health care services' quality in Saudi Arabia:

- It is widely accepted that the first step towards quality improvement is to listen to patients. However, mere "listening" is clearly of little use unless patients' views can be incorporated into quality evaluation on a basis of parity with those of health care professionals and managers . The extended version of GPAS developed in this study was not only based on patients' own views on quality, but was also designed to provide a sensitive measurement tool both of patients perspectives and of cultural and social requirements. Further implementation and adoption of this tool within the PHC services in both MoI and MoH would provide an

important aid for managers and policymakers in assessing the quality of services for other PHCs that were not included in this study. This will enable both MoI and MoH to embark on an ongoing threefold improvement strategy: first, the extended GPAS has been shown to be a reliable and valid tool, appropriate to the Saudi context, which may be used by health authorities (or individual researchers) to measure and evaluate the quality of PHC services. Second, proliferation of the use of the GPAS would help to develop and maintain a systematic database of records on levels of service quality in all their PHC network, enabling deficiencies to be targeted, and to identify the extent of variations in performance among PHC centres. Third, the use of the GPAS helps to widen the scope for eliciting patients' views within the system, since the modified version of the GPAS has been proven, both qualitatively and quantitatively, be relevant to Saudi patients' views on PHC service quality.

- Given that it may be a number of years before the concept and meaning of community involvement in health care is crystallised or feasible in Saudi Arabia, the short and medium term priority would seem to be an improvement in the representation of advocatory patients' groups. Current health care friends committees could be assisted by increasing the power and authority allocated to them. Intensive training for members of these committees in health policy process issues and patients' involvement/ rights and duties in health care would develop their role.

- Given the importance of patients' community participation, managers may need training in how to achieve this and also incentives to do so.

- Increase patients' education campaigns, particularly to increase awareness of the importance of patients' role in primary care.

- The enhancement of patients' education in the capability of the public service ability of the PHC centre.
- Increase research on PHC quality and patients' views. Survey research is essential but efforts should be made to reflect upon and implement its findings.
- PHC policies should reflect the prevailing cultural customs and religious beliefs (e.g. in respect of the gender of physicians and nurses treating female patients)
- Taking into consideration the period before sufficient Saudi doctors and nurses are operating in the PHC sector, the short and medium term priority would seem to be an improvement in the communication skills of non-Saudi doctors and nurses. Doctors and nurses recruited from overseas who work in the UK have to pass certain English Language tests, such as IELTS, before they are allowed to practise. Therefore, intensive training and proficiency standards in spoken Arabic could be recognised in the salary scale by pay increments.
- Given that what patients value most includes items such as psychological issues and doctors knowledge of the patient as well as cultural issues, and given the clear relationship between length of consultation and patient satisfaction with these kinds of issues shown by other research, priority should be given to increasing average appointment times in Saudi PHC centres.
- The PHC needs of registered patients should be identified to ensure resources are fairly and evenly available to them. This is particularly important for enabling doctors to give more time to medical consultations.
- Establishment of an effective appointment system.

- Attempts could be made to reduce overcrowding by introducing practical measures such as the provision of phone consultations between doctors, practice nurses and patients, and involving other health care professionals in the health process by allowing practice nurses to see patients with less serious illnesses.
- Increase collaboration with other health care agencies.
- The media should become more involved in patient health care awareness campaigns to emphasise the preventive and curative roles of PHC.

9.8. CONCLUSION

The Kingdom of Saudi Arabia is in global terms a young nation, but its resources enable it to invest in a health care system that has the opportunity to be one of the most advanced in the world. The advances of the technical side of the health care system have not however been matched by the development in managerial process.

This study observed that beneath the surface of the modern hospitals and PHC centre there lies a less developed system of paternalism and bureaucracy. This unique situation produces a number of questions which require answering in order for Saudi Arabia to evolve into the role of a twenty-first century country that the government and population desires.

This study attempted to shed light on one issue vital to the welfare of the Saudi population. It focused on the health care provided by the MoI and the specialised needs of the MoI population, but the results also have relevance across the health care systems of the general population. The MoI believes that its employees play a major role in the country's national security, however, there is evidence to suggest that MoI patients are not receiving the quality of care required to equip them for this role.

Evidence from this study illustrates that patients' views on quality are markedly different from those of managers and professionals. Quality of care issues are presently determined by professionals and managers and patients' views are neglected.

It is vital that in order to improve the accessibility and quality of PHC services in Saudi Arabia that a top-down approach is balanced with an increase in the scope and authority of patient groups and greater emphasis given to the views of patients. The future development of health care services in Saudi Arabia should be based in the future not only on technical aspects of care but on improvements in the aspects of quality of care which are most important to patients because a nation's future prosperity is dependent on a healthy and satisfied citizenry.

Reference

1. Calnan, M. and Gabe, J. 2001, "From consumerism to partnership? Britain's National Health Service at the turn of the century", *International Journal of Health Services: Planning, Administration, Evaluation*, vol. 31, no. 1, 119-131.

2. Moullin, M. 2002, *Delivering Excellence in Health and Social Care* Open University Press, Buckingham.

3. Coulter, A. and Magee, H. 2003, *The European patient of the future* Maidenhead : Open University Press.

4. Greenhalgh, T. and Eversley, J. 1999, *Quality in general practice : towards a holistic approach* London : King's Fund Publishing.

5. World Health Organization 2000, *Health systems : improving performance* Geneva : W.H.O.

6. Lloyd, R. C. 2004, *Quality Health Care : A Guide to Developing and Using Indicators* Jones and Bartlett Publishers International, London.

7. Harteloh, P. P. M. and Verheggen, F. W. S. M. 1994, "Quality assurance in health care. From a traditional towards a modern approach", *Health Policy*, vol. 27, no. 3, 261-270.

8. Ruiz, U. 2004, "Quality management in health care: a 20-year journey", *International Journal Of Health Care Quality Assurance Incorporating Leadership In Health Services*, vol. 17, no. 6, 323-333.

9. Ovretveit, J. 2004, "Formulating a health quality improvement strategy for a developing country", *International Journal Of Health Care Quality Assurance Incorporating Leadership In Health Services*, vol. 17, no. 7, 368-376.

10. Neuberger, R. J. 1998, "Patients Priorities," in *Primary care : core values*, Pringle, Mike, BMJ Books, London, 40-45.

11. Wensing, M., Jung, H. P., Mainz, J., Olesen, F., and Grol, R. 1998, "A systematic review of the literature on patient priorities for general practice care. Part 1: Description of the research domain", *Social Science & Medicine*, vol. 47, no. 10, 1573-1588.

12. Michel, W., Hans Peter Jung, Jan, M., Frede, O., and Richard, G. 1998, "A Systematic Review Of The Literature On Patient Priorities For General Practice Care.Part1: Description Of The Research Domain", *Social Science & Medicine*, vol. 47, no. 10, 1573-1588.

13. Grol, R., Wensing, M., Mainz, J., Ferreira, P., Hearnshaw, H., Hjortdahl, P., Olesen, F., Ribacke, M., Spenser, T., and Szecsenyi, J. 1999, "Patients' priorities with respect to general practice care: an international comparison", *Family Practice*, vol. 16, no. 1, 4.

14. Wensing, M. and Elwyn, G. 2003, "Improving the quality of health care: Methods for incorporating patients' views in health care", *BMJ*, vol. 326, no. 7394, 877.

15. Grol, R. 2001, "Improving the Quality of Medical Care: Building Bridges Among Professional Pride, Payer Profit, and Patient Satisfaction", *JAMA: The Journal of the American Medical Association*, vol. 286, no. 20, 2578-2585.

16. Larsson, B. W., Larsson, G., Chantereau, M., and Stael von Holesein, K. 2005, "International comparisons of patients' views on quality of care", *International Journal of Health Care Quality Assurance*, vol. 18, no. 1, 62-73.

17. Larsson, B. W., Larsson, G., and Starrin, B. 1999, "Patients' views on quality of care: a comparison of men and women", *Journal of Nursing Management*, vol. 7, no. 3, 133-139.

18. Larsson, B. W. and Larsson, G. 1999, "Patients' views on quality of care: do they merely reflect their sense of coherence?", *Journal of Advanced Nursing*, vol. 30, no. 1, 33-39.

19. Lewis, J. R. 1994, "Patient Views On Quality Care In General Practice: Literature Review", *Social Science & Medicine*, vol. 39, no. 5, 655-670.

20. Schneider, H. and Palmer, N. 2002, "Getting to the truth? Researching user views of primary health care", *Health Policy and Planning*, vol. 17, no. 1, 32-41.

21. Haddad, S., Potvin, L., Roberge, D., Pineault, R., and Remondin, M. 2000, "Patient perception of quality following a visit to a doctor in a primary care unit", *Family Practice*, vol. 17, no. 1, 21-29.

22. Haddad, S., Fournier, P., Machouf, N., and Yatara, F. 1998, "What does quality mean to lay people? Community perceptions of primary health care services in Guinea", *Social Science & Medicine*, vol. 47, no. 3, 381-394.

23. Williams, B. 1994, "Patient Satisfaction: A Valid Concept?", *Social Science & Medicine*, vol. 38, no. 4, 509-516.

24. Stevenson, K., Sinfield, P., Ion, V., and Merry, M. 2004, "Involving patients to improve service quality in primary care", *International Journal Of Health Care Quality Assurance Incorporating Leadership In Health Services*, vol. 17, no. 4-5, 275-282.

25. Bower, P., Roland, M., Campbell, J., and Mead, N. 2003, "Setting standards based on patients' views on access and continuity: secondary analysis of data from the general practice assessment survey", *BMJ*, vol. 326, no. 7383, 258.

26. Bower, P. 2003, "Measuring patients' assessments of primary care quality: the use of self-report questionnaires", *Expert Review of Pharmacoeconomics & Outcomes Research*, vol. 3, no. 5, 551-560.

27. Coulter, A. and Elwyn, G. 2002, "What do patients want from high-quality general practice and how do we involve them in improvement?", *British Journal of General Practice*, vol. 52, no. 11, 22-25.

28. Wensing, M. and Elwyn, G. 2002, "Research on patients' views in the evaluation and improvement of quality of care", *Quality and Safety in Health Care*, vol. 11, no. 2, 153-157.

29. Ryan, M., Scott, D. A., Reeves, C., Bate, A., van Teijlingen, E. R., Russell, E. M., Napper, M., and Robb, C. M. 2001, "Eliciting public preferences for healthcare: a systematic review of techniques", *Health Technology Assessment (Winchester, England)*, vol. 5, no. 5, 1-186.

30. Donabedian, A. 1995, "The quality of care. How can it be assessed?," in *Quality in Health Care: Theory, application, and Evolution*, Graham, Nancy O., Aspen Publishers, Inc, Gaithersburg, Maryland, 32-46.

31. Ovretveit, J. 1998, *Evaluating Health Interventions, an introduction to evaluation of health treatments, services, policies and organizational interventions* Open University Press, Buckingham.

32. World Health Organization 1996, *ALMA- ATA 1978, Primary Health Care*, WHO, UNICEF, Geneva, 1.

33. Macdonald, J. J. 1994, *Primary Health Care, Medicine in its place* Earthscan Publications Ltd., London.

34. Beckford, J. 2002, *Quality*, 2nd edn, London : Routledge.

35. Birch, K., Field, S., and Scrivens, E. 2000, *Quality in general practice* Abingdon : Radcliffe Medical Press.

36. Hall, J. E. 2004, "Pluralistic evaluation: a situational approach to service evaluation", *Journal of Nursing Management*, vol. 12, no. 1, 22-27.

37. Al-Farsy, F. 1996, *Modernity and tradition : the Saudi equation*, 3rd edn, St Peter Port, Guernsey : Knight Communications.

38. Al-Farsy, F. 1986, *Saudi Arabia : a case study in development* London : KPI.

39. Mufti, M. H. 2000, *Healthcare development strategies in the Kingdom of Saudi Arabia* New York ; London : Kluwer Academic/Plenum.

40. Explore Saudi Arabia Website. Saudi Arabia factfile. http://www.exploresaudiarabia.com/factfile/file10.htm: Accessed on . 6-2-2005.

41. Roemer, M. I. 1991, *National health systems of the world*, The countries edn, Oxford University Press, Oxford.

42. Khalil, Rida, Arab, Fahad, Ibraheem, Ala, Al-Jenidy, Samier, and Al-Saab, Othman 2004, *Ministry of Health achievements (2000-2004)*, Ministry of health publication:(Arabic version), Riyadh, Saudi Arabia.

43. Al-Farsy, F. 2001, *Modernity and tradition : the Saudi equation*, Rev edn, Knight Communications, St Peter Port, Guernsey, Channel Islands.

44. Ministry of Planning. Preliminary results for the 2004/2005 national population and housing census. http://www.planning.gov.sa/docs/census25.htm : Accessed on . 6-2-2005.

45. Al-Yousuf, M., Akerele, T. M., and Al-Mazrou, Y. Y. 2002, "Organization of the Saudi health system.", *Eastern Mediterranean Health Journal*, vol. 8, no. 4&5, 645-653.

46. WHO/UNICEF. Review of National Immunization Coverage, 1980-2003, Saudi Arabia. www.childinfo.org/eddb/immuni/mena/Saudi%20Arabia_2003_final.pdf : Accessed on . 5-2-2005.

47. National committee for traffic safety. Care accidents in Saudi Arabia between 1994-2004. http://www.trafficsafety.org.sa/statistics.htm : Accessed on . 2005.

48. WHO-Eastern Mediterranean Regional Office. Country profiles: Saudi Arabia. http://www.emro.who.int/emrinfo/CountryProfiles-saa.htm : Accessed on . 6-2-2005.

49. Sullivan, S. 1993, "The Patient Behind the Veil: Medical Culture Shock in Saudi Arabia", *Canadian Medical Association; Association médicale canadienne*, vol. 148, no. 3, 444-446.

50. Algaman, Abrahim Hamad 1999, *TQM implementation in a health care setting : a case study of a Saudi Arabia National Guard primary care setting*, PhD Thesis, Manchester Metropolitan University.

51. Rashid, N. I. and Shaheen, E. I. 1987, *King Fahd and Saudi Arabia's great evolution* Joplin, Mo., U.S.A : International Institute of Technology.

52. Ham, A., Shams, M. B., and Madden, A. 2004, *Saudi Arabia* Footscray, Vic. ; London : Lonely Planet.

53. CIA World FactBook. Saudi Arabia map. http://www.cia.gov/cia/publications/factbook/geos/sa.html . Accessed on

.2005. 11-4-2005.

54. Al-Rabeeah, A. 2003, "The history of health care in the Kingdom of Saudi Arabia with emphasis on pediatric surgery", *Saudi Medical Journal*, vol. 24, no. 5, S9-S10.

55. Ministry of Planning. Saudi Arabia Development Plans. http://www.planning.gov.sa/PLANNING/INTROe.HTM : Accessed on . 6-2-2005.

56. GAMS 2001, *Statistical Annual Report*, The General Administration of Medical Services, Ministry of the Interior, Riyadh, Saudi Arabia.

57. Al Shahrani, N M 1999, *Expectations and Perceptions of Patient Satisfaction in A Saudi Arabian Hospital*, PhD Thesis, University of Wales Swansea.

58. Al-Megren S, Al-Qarawi R. Regarded by patients as only a crossover to large hospitals: Primary health care centres need radical reform in terms of their status, staff, and equipment. Al-Watan: http://www.alwatan.com.sa/daily/2004-03-16/affair.htm 2004. 1264: 16.

59. Al-Mazrou, Y., Al-Sehri, S., and Rao, M. 1990, *Principles & Practice of Primary Health Care* Ministry of Health: Dar Al-Helal press , Riyadh.

60. Gallagher, E. B. and Maureen Searle, C. 1985, "Health services and the political culture of Saudi Arabia", *Social Science & Medicine*, vol. 21, no. 3, 251-262.

61. Stone, L. 1992, "Cultural influences in community participation in health", *Social Science & Medicine*, vol. 35, no. 4, 409-417.

62. Department of Health. Building on the best: choice, responsiveness and equity in the NHS. http://www.nhsconfed.org/docs/briefing_94.pdf: Accessed on 07/12/2004 [94]. 9-12-2003. NHS. Accessed on .7-12-2004.

63. Pascoe, G. C. 1983, "Patient satisfaction in primary health care: A literature review and analysis", *Evaluation and Program Planning*, vol. 6, no. 3-4, 185-210.

64. Carr-Hill, R. A. 1992, "The measurement of patient satisfaction", *J Public Health Med*, vol. 14, no. 3, 236-249.

65. Staniszewska, S. and Ahmed, L. 1999, "The concepts of expectation and satisfaction: do they capture the way patients evaluate their care?", *Journal of Advanced Nursing*, vol. 29, no. 2, 364-372.

66. Batchelor, C., Owens, D. J., Read, M., and Bloor, M. 1994, "Patient Satisfaction Studies: Methodology, Management and Consumer Evaluation", *International Journal of Health Care Quality Assurance*, vol. 7, no. 7, 22-30.

67. Linder-Pelz, S. 1982, "Towards A Theory Of Patient Satisfaction", *Social Science & Medicine*, vol. 16, 577-582.

68. Cleary, P. D. and McNeil, B. J. 1988, "Patient satisfaction as an indicator of quality care", *Inquiry: a Journal Of Medical Care Organization, Provision And Financing*, vol. 25, no. 1, 25-36.

69. Mansour, A. A. and al-Osimy, M. H. 1993, "A study of satisfaction among primary health care patients in Saudi Arabia", *Journal of Community Health*, vol. 18, no. 3, 163-173.

70. Stanley, J. and Blair, J. D. 1993, *Challenges in military health care : perspectives on health status and the provision of care* New Brunswick, N.J. : Transaction Publishers.

71. Starfield, B. 1998, *Primary Care Balancing Health Needs, Services, and Technology* Oxford University Press, Oxford.

72. Mansour, A. A. and Al Osimy, M. 1996, "A study of health centres in Saudi Arabia", *International Journal of Nursing Studies*, vol. 33, no. 3, 309-315.

73. Qatari, G. A. and Haran, D. 1999, "Determinants of users' satisfaction with primary health care settings and services in Saudi Arabia", *International Journal for Quality in Health Care*, vol. 11, no. 6, 523-531.

74. Saad Bin Saeed, K. 1999, "Perceptions on the influence of cost issues on quality improvement initiatives: a survey of Saudi health care managers", *International Journal for Quality in Health Care*, vol. 11, no. 1, 59-65.

75. Littlewood, J. and Yousuf, S. 2000, "Primary health care in Saudi Arabia: applying global aspects of health for all, locally", *Journal of Advanced Nursing*, vol. 32, no. 3, 675-681.

76. Saeed, A. A. and Mohamed, B. A. 2002, "Patients' perspective on factors affecting utilization of primary health care centers in Riyadh, Saudi Arabia", *Saudi Medical Journal*, vol. 23, no. 10, 1237-1242.

77. Hart, C. 2001, *Doing a Literature Search* SAGE Publications, London.

78. De Sa, C. 1993, "The preventive-curative conflict in primary health care", *Health For The Millions*, vol. 1, no. 2, 14-17.

79. World Health Organization 2000, *World Health Report 2000* World Health Organization, Geneva.

80. World, B. 1993, *World development report 1993 : investing in health* Washington, D.C. : World Bank.

81. Hall, J. J. and Taylor, R. 2003, "Health for all beyond 2000: the demise of the Alma-Ata Declaration and primary health care in developing countries", *The Medical Journal Of Australia*, vol. 178, no. 1, 17-20.

82. Walt, G. and Vaughan, P. 1982, "Primary health care approach: how did it evolve?", *Tropical Doctor*, vol. 12, no. 4, Part 1, 145-147.

83. Allen, T. and Thomas, A. 2000, *Poverty and development into the 21st century*, 2nd edn, Oxford : Oxford University Press.

84. Sachs, W. 1992, *The Development dictionary : a guide to knowledge as power* London ; Atlantic Highlands, N.J : Witwatersrand University Press : Zed Books.

85. Green, A. 1999, *An Introduction to Health Planning in Developing Countries* Oxford University Press, Oxford.

86. Phillips, D. and Verhasselt, Y. 1998, *Health and Development* Routledge, London.

87. Tarimo, E. and Webster, E. G. 1997, *Primary Health Care Concepts and Challenges in a Changing World, Alma- Ata revisited* World Health Organization.

88. Coombes, Y. 1997, "An international perspective on primary health care," in *Debates and Dilemmas in Promoting Health, A Reader*, 1st edn, Sidell, Moyra, Jones, Lenda, Katz, Jeanne, and Peberdy, Alyson, Macmillan Press Ltd., London, 209-216.

89. Phillips, D. R. 1995, *Health and Health Care in the Third World* Longman Scientific & Technical, Longman Group Ltd, Essex, England.

90. Calnan, M. 1987, *Health and illness : the lay perspective* London : Tavistock.

91. Baggott, R. 1994, *Health & Health Care in Britain*, 2nd edn, The Macmillan Press, Basingstoke.

92. WHO. WHO definition of Health. http://www.who.int/about/definition/en/ . 2005. Accessed on .20-4-2005.

93. Helman, C. 1994, *Culture, health and illness : an introduction for health professionals*, 3rd edn, Butterworth-Heinemann, Oxford.

94. Balint, M. 1972, *The doctor, his patient and the illness* International Universities Press, Inc, New York.

95. Blaxter, M. 2004, *Health* Oxford : Polity.

96. Rifkin, S. B. 1996, "Paradigms Lost: Toward a new understanding of community participation in health programmes", *Acta Tropica*, vol. 61, no. 2, 79-92.

97. Bhuyan, K. 2004, "Health promotion through self-care and community participation: Elements of a proposed programme in the developing countries", *BMC Public Health*, vol. 4, no. 1, 11.

98. Lewis, M., Eskeland, G., and Traa-Valerezo, X. 2004, "Primary health care in practice: is it effective?", *Health Policy*, vol. 70, no. 3, 303-325.

99. World Health Organization and United Nations International Children's Emergency Fund 1978, *Primary health care : report of the International Conference on Primary Health Care, Alma-Ata, USSR, 6-12 September 1978* Geneva : World Health Organization.

100. Mechanic, D. 1968, *Medical Sociology*, 2nd, The Free Press, New York.

101. Abel-Smith, B. 1999, *An Introduction to Health Policy, Planning and Financing* Addison Wesley Longman Limited, Harlow, Essex.

102. Safran, D. G. 2004, "Primary care performance: views from the patient," in *The future of primary care*, Showstack, Jonathan A., Rothman, Arlyss Anderson, and Hassmiller, Susan, Jossey-Bass, San Francisco, 17-39.

103. EURACT. European definition of General Practice/Family Medicine. http://euract.org/html/pap04102.shtml .Accessed on. 25-1-2005.

104. Moore, G. T. 2004, "Primary care in crisis: current pressures and threats to primary care as we know it," in *The future of primary care*, Showstack, Jonathan A., Rothman, Arlyss Anderson, and Hassmiller, Susan, Jossey-Bass, San Francisco, 3-16.

105. Donaldson, M. S., Institute of Medicine Division of Health Care Services Committee on the, and Future of Primary Care 1996, *Primary care : America's health in a new era* Washington, D.C. : National Academy Press.

106. Twinn, S. 2001, "Primary health care", *Journal of Clinical Nursing*, vol. 10, no. 3, 303-304.

107. World Health Organization. The Ljubljana Charter on Reforming Health Care, 1996. http://www.euro.who.int/AboutWHO/Policy/20010927_5 Accessed on. 20-2-2005.

108. Irvine, D. and Irvine, S. 1996, *The practice of quality* Radcliffe Medical Press, Oxford.

109. Lewis, J. 1999, "The concept of community care and primary care in the UK: the 1960s to 1990s", *Health and Social Care in the Community*, vol. 7, no. 5, 333-341.

110. Maynard, A. and Bloor, K. 1995, "Primary care and health care reform: the need to reflect before reforming", *Health Policy (Amsterdam, Netherlands)*, vol. 31, no. 3, 171-181.

111. Wilkin, D., Gillam, S., and Leese, B. 1999, *The National Tracker Survey of Primary Care Groups and Trusts : progress and challenges, 1999/2000* University of Manchester, National Primary Care Research and Development Centrein association with The King's Fund, Manchester.

112. Starfield, B. 1994, "Is primary care essential?", *Lancet*, vol. 344, no. 8930, 1129-1133.

113. Bennett, F. J. 1979, "Primary health care and developing countries", *Social Science & Medicine.Part A: Medical Psychology & Medical Sociology*, vol. 13, 505-514.

114. Appleby, J. and Dixon, J. 2004, "Patient choice in the NHS", *BMJ*, vol. 329, no. 7457, 61-62.

115. Bosanquet, N. and Salisbury, C. 1998, "The practice," in *General practice under the National Health Service 1948-1997*, Loudon, Irvine, Horder, John, and Webster, Charles, Clarendon Press, London, 45-64.

116. Magnussen, L., Ehiri, J., and Jolly, P. 2004, "Comprehensive Versus Selective Primary Health Care: Lessons For Global Health Policy", *Health Affairs*, vol. 23, no. 3, 167-176.

117. Unger, J. P. and Killingsworth, J. R. 1986, "Selective primary health care: A critical review of methods and results", *Social Science & Medicine*, vol. 22, no. 10, 1001-1013.

118. Taylor, C. and Jolly, R. 1988, "The straw men of primary health care", *Social Science & Medicine*, vol. 26, no. 9, 971-977.

119. Navarro, V. 2002, "The World Health Report 2000: Can Health Care Systems Be Compared Using a Single Measure of Performance?", *American Journal of Public Health*, vol. 92, no. 1, 31-34.

120. Navarro, V. 1984, "A critique of the ideological and political positions of the Willy Brandt report and the WHO Alma-Ata declaration", *Social Science & Medicine*, vol. 18, no. 6, 467-474.

121. Navarro, V. 2004, "The world situation and WHO", *The Lancet*, vol. 363, no. 9417, 1321-1323.

122. Al-Mazrou, Y. and The Scientific Committee of Quality Assurance in Primary Health Care 1994, *Quality assurance in a primary health care manual* Ministry of Health in association with the World Health Organization/ Eastern Mediterranean Regional Office (WHO-EM/PHC/81-A/G/93), Riyadh.

123. Blackburn, J. and Holland, J. 1998, *Who Changes? Institutionalizing participation in development* Intermediate Technology Publications Ltd, London.

124. Nelson, N. and Wright, S. 1997, *Power and Participatory Development, Theory and practice* Intermediate Technology Publications, London.

125. Harrison, Stephen, Milewa, T, and Dowswell, G 2002, *Patient and public involvement in NHS primary care organisations: final report of a Department of Health research study*, University of Manchester Department of Applied Social Science, Manchester.

126. Florin, D. and Dixon, J. 2004, "Public involvement in health care", *BMJ*, vol. 328, no. 7432, 159-161.

127. Calnan, M. 1988, "Towards a conceptual framework of lay evaluation of health care", *Social Science & Medicine*, vol. 27, no. 9, 927-933.

128. Blendon, R. J., Kim, M., and Benson, J. M. 2001, "The public versus the World Health Organization on health system performance", *Health Affairs*, vol. 20, no. 3, 10-20.

129. Murray, C. J. L., Kawabata, K., and Valentine, N. 2001, "Perspective: People's Experience Versus People's Expectations", *Health Affairs*, vol. 20, no. 3, 21-24.

130. Donabedian, A. 2003, *An Introduction to Quality Assurance in Health Care* Oxford University Press, Oxford.

131. Donabedian, A. 1980, *The Definition of Quality and Approaches to its Assessment* Health Administration Press, Michigan.

132. Ovretveit, J. 2001, "Quality evaluation and indicator comparison in health care", *The International Journal Of Health Planning And Management*, vol. 16, no. 3, 229-241.

133. Starfield, B. 2004, "Deconstructing primary care," in *The future of primary care*, Showstack, Jonathan A., Rothman, Arlyss Anderson, and Hassmiller, Susan, Jossey-Bass, San Francisco , 61-88.

134. Showstack, J. A., Lurie, N., Larson, E. B., Rothman, A. A., and Hassmiller, S. 2004, "Primary Care: the next renaissance," in *The Future of Primary Care*, Showstack, Jonathan A., Rothman, Arlyss Anderson, and Hassmiller, Susan, Jossey-Bass, San Francisco, 301-311.

135. Donaldson, L. Quality in Health Care: the UK Policy Perspective. http://www.dh.gov.uk/assetRoot/04/01/84/65/04018465.pdf. 1999. Paper given at the Commonwealth Fund/The Nuffield Trust 1999 Margaret: E Mahoney Symposium. Accessed on . 13-05-2004.

136. Coulter, A., John Fry, T. F., and Nuffield, T. 2002, *The autonomous patient : ending paternalism in medical care* London : TSO, c2002.

137. Baggott, R. 2004, *Health and Health Care in Britain* Palgrave Macmillan, Houndmils.

138. Racine, J. F. 1995, "A Double Take on the History of Quality in Health Care," in *Quality in Health Care: Theory Application, and Evolution*, Graham, Nancy O., Aspen Publishers, Inc., Gaithersburg, Maryland, 15-31.

139. Ellis, R. and Whittington, D. 1993, *Quality Assurance in Health Care: a Handbook* Edward Arnold, London.

140. Sale, D. 1996, *Quality Assurance, For Nurses and Other members of the Health Care Team* Macmillan Press LTD, London, UK.

141. Polder, J. J. and Jochemsen, H. 2000, "Professional Autonomy In The Health Care System", *Theoretical Medicine*, vol. 21, no. 477, 491.

142. Sale, D. 2000, *Quality Assurance a pathway to excellence* Macmillan Press Ltd, London.

143. Hoogland, J. and Jochemsen, H. 2000, "Professional Autonomy And The Normative Structure Of Medical Practice", *Theoretical Medicine*, vol. 21, 457-475.

144. Bull, M. 1992, *Professional Accountability via CQI, in Improving Quality: A Guide to Effective Programs* Aspen, Gaithersburg.

145. Al-Assaf, A. F. and Schmele, J. A. 1997, *The Textbook of Total Quality in Healthcare* St. Lucie Press, Boca Raton, Florida.

146. Brook, R. and Avery, A. 1975, *Quality Assurance Mechanism in the U.S. : from there to where?* Rand, Santa Monica.

147. Egdahl, R. H. and Gertman, P. M. 1976, *Quality Assurance in Health Care* Aspen Publication, Germantown, Maryland.

148. World Health Organization and ISQUA 2003, *Quality and accreditation in health care services: A GLOBAL REVIEW*, World Health Organization , Geneva .

149. Nicholas, D. D., Heiby, J. R., and Hatzell, T. A. 1991, "The Quality Assurance Project: introducing quality improvement to primary health care in less developed countries", *Quality Assurance In Health Care: The Official Journal Of The International Society For Quality Assurance In Health Care / ISQA*, vol. 3, no. 3, 147-165.

150. Campbell, S. M., Roland, M. O., and Buetow, S. A. 2000, "Defining quality of care", *Social Science & Medicine*, vol. 51, no. 11, 1611-1625.

151. Graham, N. O. 1995, *Quality in Health Care Theory, Application, and Evolution* Aspen Publishers, Inc, Gaithersburg, Maryland.

152. Scally, G. and Donaldson, L. J. 1998, "Looking forward: Clinical governance and the drive for quality improvement in the new NHS in England", *BMJ*, vol. 317, no. 7150, 61-65.

153. Powell, M. A. 1997, *Evaluating the National Health Service* Buckingham : Open University Press.

154. Rivett, G. 1998, *From cradle to grave: fifty years of the NHS* King's Fund, London.

155. Seelos, L. and Adamson, C. 1994, "Redefining NHS Complaint Handling- The Real Challenge", *International Journal of Health Care Quality Assurance*, vol. 7, no. 6, 26-31.

156. BBC website. Inquiry into organ scandal. http://news.bbc.co.uk/1/hi/health/547326.stm :Accessed on . 1-2-0005.

157. The Bristol Royal Infirmary Inquiry. The Inquiry into the Management of Care of children receiving complex heart surgery at the Bristol Royal Infirmary. http://www.bristol-inquiry.org.uk/: Accessed on 06/02 . 2005.

158. BBC website. Harold Shipman: The killer doctor. http://news.bbc.co.uk/1/hi/uk/3391897.stm Accessed on 05-02-2005.

159. Kelly, A. 1998, "Professionals and the changed environment," in *The Social Construction of Community Care*, Symonds, Anthea and Kelly, Anne, Macmillan Press Ltd, Houndmills, 94-112.

160. Attree, M. 1996, "Towards a conceptual model of 'Quality Care'", *International Journal of Nursing Studies*, vol. 33, no. 1, 13-28.

161. Steel, M. 2001, *Oxford Wordpower dictionary* Oxford University Press, Oxford.

162. Pattison, S. 1997, *The Faith of the Managers When Management Becomes Religion* Cassell, London.

163. Al-Assaf, A. F. and Sheikh, M. 2004, *Quality Improvement in Primary Health Care: A Practical Guide* WHO Regional Publications, Eastern Mediterranean , Cairo.

164. Donabedian, A. 1988, "The quality of care. How can it be assessed?", *JAMA: The Journal of the American Medical Association*, vol. 260, no. 12, 1743-1748.

165. Donabedian, A. 1987, "Some basic issues in evaluating the quality of health care", *NLN Publications* no. 21-2194, 3-28.

166. Donabedian, A. 1992, "Quality assurance in health care: consumers' role", *Quality in Health Care*, vol. 1, 247-251.

167. Blumenthal, D. 1996, "Quality of Care- What is It?- Part One of Six", *The New England Journal of Medicine*, vol. 335, no. 12, 891-894.

168. De Geyndt, W. and World, B. 1995, *Managing the quality of health care in developing countries* Washington, D.C : The World Bank.

169. Huycke, L. and All, A. C. 2000, "Quality in health care and ethical principles", *Journal of Advanced Nursing*, vol. 32, no. 3, 562-571.

170. Tickle, F. and Vorley, G. 2000, *Introduction to Quality Assurance* Quality Management & Training (Publications) Ltd, Basingstoke, Hampshire.

171. Hill, R. G. and Chung, M. C. 1995, "Quality assurance and the myth of rationality", *International Journal of Health Care Quality Assurance*, vol. 8, no. 1, 18-22.

172. Calnan, M. and Ferlie, E. 2003, "Analysing process in healthcare: the methodological and theoretical challenges", *Policy and Politics*, vol. 31, no. 2, 185-193.

173. Toon, P. D. 1994, *What is good general practice? a philosophical study of the concept of high quality medical care* London : Royal College of General Practitioners.

174. Sarvimaki, A. and Banko, S. S. 2001, "Values and evaluation in health care", *Journal of Nursing Management*, vol. 9, no. 3, 129-137.

175. Shelton, P. J. 2000, *Measuring and improving patient satisfaction* Gaithersburg, Md. : Aspen Publishers.

176. Brook, R. H., McGlynn, E. A., and Cleary, P. D. 1996, "Measuring Quality of Care-Part Two of Six", *The New England Journal of Medicine*, vol. 335, no. 13, 966-970.

177. Coulter, Angela, Fitzpatrick, R., and Davis, Lucy-Jane 2002, *Patient and Public Perspectives on Health Care Performance*, Report prepared for the Commission for Health Improvement: http://www.chi.nhs.uk/eng/ratings/academic_papers/index.shtml.

178. Atkinson, S. and Haran, D. 2005, "Individual and district scale determinants of users' satisfaction with primary health care in developing countries", *Social Science & Medicine*, vol. 60, no. 3, 501-513.

179. Baldo, M. H., Khoja, T. A., Al-Mazrou, Y. Y., and Basulaiman, M. 1998, "Augmenting hospital support of maternal and child health care, Saudi Arabia", *Eastern Mediterranean Health Journal*, vol. 4, no. 1, 11-20.

180. Roemer, M., I and Montoya-Aguilar, C. 1988, *Quality assessment and assurance in primary health care* World Health Organization, Geneva.

181. World Health Organisation and International Society for Quality in Health Care 2000, *Quality Improvement Strategies in Health Care for Middle and Low-Income Countries*, Report of the 4th World Health Organisation & International Society for Quality in Health Care- Review Meeting, Dublin, Ireland, 11-12 September 2000.

182. Hart, J. T. 1988, *A new kind of doctor : the general practitioner's part in the health of the community* Merlin Press, London.

183. Stanlszewska, S. and Henderson, L. 2004, "Patients' evaluations of their health care: the expression of negative evaluation and the role of adaptive strategies", *Patient Education and Counseling*, vol. 55, no. 2, 185-192.

184. Harrison, S., Dowswell, G., and Milewa, T. 2002, "Guest editorial: public and user 'involvement' in the UK National Health Service", *Health and Social Care in the Community*, vol. 10, no. 2, 63-66.

185. Tritter, J. Q. and Calnan, M. 2002, "Cancer as a chronic illness? Reconsidering categorization and exploring experience", *European Journal of Cancer Care*, vol. 11, no. 3, 161-165.

186. Earl-Slater, A. 2004, *Lay involvement in health and other research* Abingdon : Radcliffe Medical.

187. Pietroni, P., Winkler, F., and Graham, L. 2003, "Cultural revolution", *BMJ*, vol. 326, no. 7402, 1304-1306.

188. Richards, T. 1999, "Patients' priorities", *BMJ*, vol. 318, no. 7179, 277.

189. Commission for Health Improvement. Sharing the learning in patient and public involvement from the CHI's work. www.healthcarecommission.org.uk/assetRoot/04/01/01/88/04010188.pdf . 2003. CHI-NHS. 16-1-0005.

190. Bandesha, G. and Litva, A. 2005, "Perceptions of community participation and health gain in a community project for the South Asian population: a qualitative study", *Journal of Public Health*, vol. 27, no. 3, 241-245.

191. Pickard, S. and Smith, K. 2001, "A 'Third Way' for lay involvement: what evidence so far?", *Health Expectations*, vol. 4, no. 3, 170-179.

192. Rowe, R. and Shepherd, M. 2002, "Public participation in the new NHS: No closer to citizen control?", *Social Policy & Administration*, vol. 36, no. 3, 275-290.

193. Brown, I. 1994, "Community and participation for general practice: Perceptions of general practitioners and community nurses", *Social Science & Medicine*, vol. 39, no. 3, 335-344.

194. Alborz, A., Wilkin, D., and Smith, K. 2002, "Are primary care groups and trusts consulting local communities?", *Health and Social Care in the Community*, vol. 10, no. 1, 20-28.

195. Poulton, B. C. 1999, "User involvement in identifying health needs and shaping and evaluating services: is it being realised?", *Journal of Advanced Nursing*, vol. 30, no. 6, 1289-1296.

196. Crawford, M. J., Rutter, D., Manley, C., Weaver, T., Bhui, K., Fulop, N., and Tyrer, P. 2002, "Systematic review of involving patients in the planning and development of health care", *BMJ*, vol. 325, no. 7375, 1263.

197. Pritchard, P. 1981, *Patient participation in general practice* Royal College of General Practitioners, London.

198. Marshall, M. and Campbell, S. 2002, "Introduction to quality assessment in general practice," in *Quality indicators for general practice : a practical guide to clinical quality indicators for primary care health professionals and managers*, The Royal Society of Medicine Press Ltd, London, 1-6.

199. Reeder, L. G. 1972, "The Patient-Client as a Consumer: Some Observations on the Changing Professional-Client Relationship", *Journal of Health and Social Behavior*, vol. 13, no. 12, 406-412.

200. BBC website. Cyberchondriacs. http://www.bbcworld.com/content/clickonline_archive_20_2004.asp?pageid=666&co_pageid=2 . 20-3-2004. Accessed on .19-4-2005.

201. Denzin, N. K. and Lincoln, Y. S. 2003, "Introduction: the Discipline and Practice of Qualitative Research," in *Collecting and Interpreting Qualitative Materials*, Denzin, Norman K and Lincoln, Yvonna S, Sage Publications Ltd., London, 1-45.

202. Murphy, E., Dingwall, R., Greatbatch, D., Parker, S., and Watson, P. 1998, "Qualitative research methods in health technology assessment: a review of the literature", *Health Technology Assessment (Winchester, England)*, vol. 2, no. 16, iii-274.

203. Bruster, S. 2005, "Seeking the Views of Consumers Using Quantitative Measures: Patients' Experience Surveys," in *Researching health care consumers: critical approaches*, Burr, Jennifer and Nicolson, Paula, Palgrave Macmillan, Basingstoke, 55-70.

204. Creswell, J. W. 2003, *Research design : qualitative, quantitative, and mixed method approaches*, 2nd edn, Sage Publications, London.

205. Lewis, J. R. and Williamson, V. 1995, "Examining patient perceptions of quality care in general practice: comparison of quantitative and qualitative methods", *The British Journal of General Practice: the Journal of the Royal College of General Practitioners*, vol. 45, no. 394, 249-253.

206. Neuman, L. W. 2003, *Social Research Methods, Qualitative and Quantitative Approach* Pearson Education, Inc., London.

207. Runciman, W. B. 2002, "Qualitative versus quantitative research- balancing cost, yield and feasibility", *Quality and Safety in Health Care*, vol. 11, no. 2, 146-147.

208. Pope, C. and Mays, N. 2001, *Qualitative Research in Health Care*, 2 edn, BMJ Books, London.

209. Wensing, M., Grol, R., and Smits, A. 1994, "Quality judgements by patients on general practice care: A literature analysis", *Social Science & Medicine*, vol. 38, no. 1, 45-53.

210. Concato, M. M. M. J. and Feinstein, M. D. 1997, "Asking Patients What They Like: Overlooked Attributes of Patient Satisfaction with Primary Care", *The American Journal of Medicine*, vol. 102, no. 4, 399-406.

211. Cleary, P. D. 1999, "The increasing importance of patient surveys", *BMJ*, vol. 319, no. 7212, 720-721.

212. Williams, B., Coyle, J., and Healy, D. 1998, "The meaning of patient satisfaction: An explanation of high reported levels", *Social Science & Medicine*, vol. 47, no. 9, 1351-1359.

213. Sitzia, J. and Wood, N. 1997, "Patient satisfaction: A review of issues and concepts", *Social Science & Medicine*, vol. 45, no. 12, 1829-1843.

214. Sixma, H. J., Kerssens, J. J., Campen, C. V., and Peters, L. 1998, "Quality of care from the patients' perspective: from theoretical concept to a new measuring instrument", *Health Expectations*, vol. 1, no. 2, 82-95.

215. Parasuraman, A., Zeithaml, V. A., and Berry, L. L. 1994, "Alternative scales for measuring service quality: A comparative assessment based on psychometric and diagnostic criteria", *Journal of Retailing*, vol. 70, no. 3, 201-230.

216. Larsson, B. W. and Larsson, G. 2003, "Development of a short form of the Quality from the Patient's Perspective (QPP) questionnaire.", *Journal of Clinical Nursing*, vol. 11, no. 5, 681-687.

217. Cohen, G., Forbes, J., and Garraway, M. 1996, "Can different patient satisfaction survey methods yield consistent results? Comparison of three surveys", *BMJ*, vol. 313, no. 7061, 841-844.

218. Dufrene, R. L. 2000, "An evaluation of a patient satisfaction survey: validity and reliability", *Evaluation and Program Planning*, vol. 23, no. 3, 293-300.

219. Fitzpatrick, R. 1991, "Surveys of patients' satisfaction: I-Important general considerations", *BMJ (Clinical Research Ed.)*, vol. 302, no. 6781, 887-889.

220. Fitzpatrick, R. 1991, "Surveys of patient satisfaction: II-Designing a questionnaire and conducting a survey", *BMJ (Clinical Research Ed.)*, vol. 302, no. 6785, 1129-1132.

221. Rice, P. L. and Ezzy, D. 1999, *Qualitative Research Methods, a health focus* Oxford University Press, Victoria, Australia.

222. Bower, P. 2003, "Measuring patients' assessments of primary care quality: the use of self-report questionnaires", *Expert Review of Pharmacoeconomics & Outcomes Research*, vol. 3, no. 5, 551-560.

223. Starfield, B. 1991, "Innovative Ways to Study Primary Care Using Traditional Methods," in *Primary Care Research, Traditional and Innovative Approaches*, vol. 1 Norton, Peter G, Stewart, Moira, Tudiver, Fred, Bass, Martin J, and Dunn, Earl V, Sage Publications Ltd., London, 26-39.

224. Helman, C. G. 1991, "Research in Primary Care," in *Primary Care Research, Traditional and Innovative Approaches*, vol. 1 Norton, Peter G, Stewart, Moira, Tudiver, Fred, Bass, Martin J, and Dunn, Earl V, Sage Publications Ltd., London, 105-124.

225. van der Geest, S., Speckmann, J. D., and Streefland, P. H. 1990, "Primary health care in a multi-level perspective: Towards a research agenda", *Social Science & Medicine*, vol. 30, no. 9, 1025-1034.

226. Kuzel, A. J. and Like, R. C. 1991, "Standards of Trustworthiness for Qualitative Studies in Primary Care," in *Primary Care Research, Traditional and Innovative Approaches*, Norton, Peter G, Stewart, Moira, Tudiver, Fred, Bass, Martin J, and Dunn, Earl V, Sage Publications Ltd., London, 138-158.

227. Brody, H. 1991, "Qualitative Research in Primary Care," in *Primary Care Research, Traditional and Innovative Approach*, vol. 1 Norton, Peter G, Stewart, Moira, Tudiver, Fred, Bass, Martin J, and Dunn, Earl V, Sage Publications Ltd., London, 125-137.

228. McWhinney, I. R. 1991, "Primary Care Research in the Next Twenty Years," in *Primary Care Research, Traditional and Innovative Approaches*, vol. 1 Norton, Peter G, Stewart, Moira, Tudiver, Fred, Bass, Martin J, and Dunn, Earl V, Sage Publications Ltd., London, 1-12.

229. Borkan, J. M. 2004, "Mixed Methods Studies: A Foundation for Primary Care Research", *Annals of Family Medicine*, vol. 2, no. 1, 4-6.

230. Creswell, J. W., Fetters, M. D., and Ivankova, N. V. 2004, "Designing A Mixed Methods Study In Primary Care", *Annals of Family Medicine*, vol. 2, no. 1, 7-12.

231. Froberg, D. G. and Kane, R. L. 1989, "Methodology for measuring health-state preferences-I: Measurement strategies", *Journal Of Clinical Epidemiology*, vol. 42, no. 4, 345-354.

232. Penelope, M. M. M. 1999, "Public involvement in health care priority setting: an overview of methods for eliciting values", *Health Expectations*, vol. 2, no. 4, 222-234.

233. McIver, S. 1993, *Obtaining The Views of Users of Primary and Community Health Care Services* King's Fund Centre, London.

234. Hasin, M. A. A., Seeluangsawat, R., and Shareef, M. A. 2001, "Statistical measures of customer satisfaction for health care quality assurance:a case study", *International Journal of Health Care Quality Assurance*, vol. 14, no. 1, 6-13.

235. Al-Qatari, Ghazi 1997, *An Evaluation Study of the Quality of Primary Health Care in Qatteef, Eastern Saudi Arabia*, Ph.D, Liverpool University.

236. Al-Shekh, Ahmed 2003, *Perceptions of Hospital Experiences in Riyadh City, Saudi Arabia: A Comparison of Service Quality in Public and Private Hospitals*, Ph.D, University of Wales Swansea.

237. Meakin, R. and Weinman, J. 2002, "The ' Medical Interview Satisfaction Scale' (MISS-21) adapted for British general practice", *Family Practice*, vol. 19, no. 3, 257-263.

238. Baltussen, R. M. P. M., YE, Y., Haddad, S., and Sauerborn, R. S. 2002, "Perceived quality of care of primary health care services in Burkina Faso", *Health Policy and Planning*, vol. 17, no. 1, 42.

239. Hosek, S. D., United States, Dept.of Defense, and Office of the Secretary of Defense 1995, *The demand for military health care supporting research for a comprehensive study of the military health care system* RAND, Santa Monica, CA.

240. Bowling, A. 2002, *Research Methods in Health, Investigating health and Health Services,* 2nd edn, Open University Press, Buckingham.

241. Sim, J. and Wright, C. 2000, *Research in Health Care* Nelson Thornes Ltd, Cheltenham.

242. Bryman, A. 2001, *Social Research Methods* Oxford University Press, Oxford.

243. Sarantakos, S. 1998, *Social Research,* 2nd edn, Palgrave, Basingstoke, Hampshire.

244. Creswell, J. W. 1994, *Research design : qualitative and quantitative approaches* Thousand Oaks, Calif. ; London : Sage Publications.

245. Frankfort-Nachmias, C. and Nachmias, D. 1996, *Research Methods in the Social Sciences,* 5th edn, Arnold, London.

246. Smith, M. J. 1998, *Social science in question* Sage Publications in association with the Open University, London.

247. Manicas, P. T. 1998, *A History and Philosophy of the Social Sciences* Basil Blackwell, Oxford.

248. Hyde, K. F. 2000, "Recognising deductive processes in qualitative research", *Qualitative Market Research: An International Journal,* vol. 3, no. 2, 82-89.

249. Reynolds, P. D. 1971, *A Primer in Theory Construction* The Bobbs-Merrill Company, Inc., New York.

250. Denzin, N. K. and Lincoln, Y. S. 2005, "Introduction: the Discipline and Practice of Qualitative Research," in *The Sage Handbook of Qualitative Research,* 3rd edn, Denzin, Norman K and Lincoln, Yvonna S, SAGE Publications Ltd, London, 1-41.

251. Seale, C., Gobo, G., Gubrium, J. F., and Silverman, D. 2004, *Qualitative research practice* Sage Publications, London.

252. Denzin, N. K. and Lincoln, Y. S. 2003, *Collecting and Interpreting Qualitative Materials* SAGE Publications, Inc, London.

253. Stenbacka, C. 2001, "Qualitative research requires quality concepts of its own", *Management Decision,* vol. 39, no. 7, 551-555.

254. Silverman, D. 2000, *Doing Qualitative Research, A practical Handbook* SAGE Publications Ltd, London.

255. Miles, M. B. and Huberman, A. M. 1994, *Qualitative data analysis : an expanded sourcebook,* 2nd edn, Thousand Oaks, Calif. ; London : Sage Publications.

256. Morse, J. M. 1999, "Qualitative Generalizability", *Qualitative Health Research*, vol. 9, no. 1, 5-6.

257. McKenna, H. P. 1997, "Theory and research: a linkage to benefit practice", *International Journal of Nursing Studies*, vol. 34, no. 6, 431-437.

258. Johnstone, P. L. 2004, "Mixed Methods, Mixed Methodology Health Services Research in Practice", *Qualitative Health Research*, vol. 14, no. 2, 259-271.

259. Michell, J. 2003, "Pragmatism, Positivism and the Quantitative Imperative", *Theory Psychology*, vol. 13, no. 1, 45-52.

260. Silverman, D. 1997, *Qualitative Research, Theory, Method and Practice* SAGE Publications Ltd, London.

261. Dxon-Woods, M., Shaw, R. L., Agarwal, S., and Smith, J. A. 2004, "The problem of appraising qualitative research", *Quality and Safety in Health Care*, vol. 13, no. 3, 223-225.

262. Mays, N. and Pope, C. 2001, "Quality in qualitative health research," in *Qualitative Research in Health Care*, Pope, Catherine and Mays, Nicholas, BMJ Books, London, 89-101.

263. Seale, C. 2004, "Quality in qualitative research," in *Qualitative Research Practice*, Seale, Clive, Gobo, Giampietro, and Silverman, David, SAGE Publications, London, 409-434.

264. Burr, J. 2005, "On the shoulders of Giants': Putting the Quality into Qualitative Methods in 'Consumer' Research," in *Researching health care consumers: critical approaches*, Burr, Jennifer and Nicolson, Paula, Palgrave Macmillan, Basingstoke, 112-128.

265. Chapple, A. and Rogers, A. 1998, "Explicit guidelines for qualitative research: a step in the right direction, a defence of the 'soft' option, or a form of sociological imperialism?", *Family Practice*, vol. 15, no. 6, 556-561.

266. Barbour, R. S. 2001, "Checklists for improving rigour in qualitative research: a case of the tail wagging the dog?", *BMJ*, vol. 322, no. 7294, 1115-1117.

267. Pope, C. and Mays, N. 1995, "Qualitative Research: Reaching the parts other methods cannot reach: an introduction to qualitative methods in health and health services research", *BMJ*, vol. 311, no. 6996, 42-45.

268. MacLean, L. M., Meyer, M., and Estable, A. 2004, "Improving Accuracy of Transcripts in Qualitative Research", *Qualitative Health Research*, vol. 14, no. 1, 113-123.

269. Glaser, B. G. and Strauss, A. L. 1967, *The Discovery of Grounded Theory: Strategies for Qualitative Research* Aldine Publishing Company, Hawthorne, N.Y.

270. Strauss, A. L. and Corbin, J. 1997, *Grounded Theory in Practice* SAGE Publication, Inc., London.

271. Strauss, A. L. and Corbin, J. 1998, *Basics of Qualitative Research, Techniques and Procedures for Developing Grounded Theory*, 2nd edn, SAGE Publications, Inc., London.

272. Charmaz, K. 2005, "Grounded Theory in the 21ST Century: applications for advancing social justice studies," in *The Sage Handbook of Qualitative Research*, 3rd edn, Denzin, Norman K and Lincoln, Yvonna S, SAGE Publications, Inc, London, 507-557.

273. Babbie, E. 2001, *The Practice of Social Research*, 9 edn, Wadsworth, Thomson Learning, London.

274. Christine Webb BA MSc PhD RN RSCN RNT 1999, "Analysing qualitative data: computerized and other approaches", *Journal of Advanced Nursing*, vol. 29, no. 2, 323-330.

275. Pope, C., van Royen, P., and Baker, R. 2002, "Qualitative methods in research on healthcare quality", *Quality and Safety in Health Care*, vol. 11, no. 2, 148-152.

276. Scientific Software Development. ATLAS.ti, visual qualitative data analysis, management, and model building. [WINDOWS 4.2]. 1997. Scientific Software Development.

277. Oppenheim, A. N. 1992, *Questionnaire Design, Interviewing and Attitude Measurement*, Continuum, London.

278. Bryman, A. and Cramer, D. 2001, *Quantitative data analysis with SPSS Release 10 for Windows : a guide for social scientists*, London: Brunner/Routledge.

279. Bryman, A. 1998, *Research Methods and organization Studies* Unwin Hyman Ltd, London.

280. Tuma, N. 2004, "Modelling Change," in *Handbook of Data Analysis*, Hardy, Melissa and Bryman, Alan, SAGE Publications Ltd, London, 309-330.

281. Statistics department 2002, *Health statistical year book 2001/2002*, Ministry of Health, Kingdom of Saudi Arabia: Available online: http://www.moh.gov.sa/statistics/stat_books.html, Riyadh.

282. Bower, P., Mead, N., and Roland, M. 2002, "What dimensions underlie patient responses to the General Practice Assessment Survey? A factor analytic study", *Family Practice*, vol. 19, no. 5, 489.

283. Bower, P. and Roland, M. O. 2003, "Bias in patient assessments of general practice: general practice assessment survey scores in surgery and postal responders", *The*

British Journal of General Practice: the Journal of the Royal College of General Practitioners, vol. 53, no. 487, 126-128.

284. Sekaran, U. 2003, *Research methods for business : a skill-building approach*, 4th edn, New York : Wiley.

285. Adams, J. L., Wickstrom, S. L., Burgess, M. J., Lee, P. P., and Escarce, J. J. 2003, "Sampling Patients within Physician Practices and Health Plans: Multistage Cluster Samples in Health Services Research", *Health Services Research*, vol. 38, no. 6p.1, 1625-1640.

286. Cosby, R. H., Howard, M., Kaczorowski, J., Willan, A. R., and Sellors, J. W. 2003, "Randomizing patients by family practice: sample size estimation, intracluster correlation and data analysis", *Family Practice*, vol. 20, no. 1, 77-82.

287. Bland, J. M. 2000, *An Introduction to Medical Statistics*, 3rd edn, Oxford University Press, Oxford.

288. Campbell, M. K., Mollison, J., Steen, N., Grimshaw, J. M., and Eccles, M. 2000, "Analysis of cluster randomized trials in primary care: a practical approach", *Family Practice*, vol. 17, no. 2, 192-196.

289. Donner, A. and Klar, N. 2000, *Design and analysis of cluster randomization trials in health research* London : Arnold.

290. Killip, S., Mahfoud, Z., and Pearce, K. 2004, "What Is an Intracluster Correlation Coefficient? Crucial Concepts for Primary Care Researchers", *Annals of Family Medicine*, vol. 2, no. 3, 204-208.

291. Donner, A. and Klar, N. 1994, "Cluster randomization trials in epidemiology: theory and application", *Journal of Statistical Planning and Inference*, vol. 42, no. 1-2, 37-56.

292. Kirkwood, B. R. and Sterne, J. A. C. 2003, *Essential medical statistics*, 2nd edn, Malden, Mass. ; Oxford : Blackwell Science.

293. Bland JM. Cluster randomised trials in the medical literature. 2003. (UnPub)

294. Underwood, M., Barnett, A., and Hajioff, S. 1998, "Cluster randomization: a trap for the unwary", *The British Journal of General Practice: the Journal of the Royal College of General Practitioners*, vol. 48, no. 428, 1089-1090.

295. Ukoumunne, O. C., Gulliford, M. C., Chinn, S., Sterne, J. A., and Burney, P. G. 1999, "Methods for evaluating area-wide and organisation-based interventions in health and health care : a systematic review", *Health Technology Assessment (Winchester, England)*, vol. 3, no. 5, iii-i92.

296. Armitage, P. 1972, "History of randomised controlled trials", *The Lancet*, vol. 299, no. 7765, 1388.

297. Flynn, Terry Nicholas 2002, *Design and analysis of randomised controlled trials : economic aspects of cluster randomisation,* PhD thesis, University of Bristol.

298. Cosby, R. H., Howard, M., Kaczorowski, J., Willan, A. R., and Sellors, J. W. 2003, "Randomizing patients by family practice: sample size estimation, intracluster correlation and data analysis", *Family Practice*, vol. 20, no. 1, 77-82.

299. Kerry, S. M. and Bland, J. M. 1998, "Statistics notes: Sample size in cluster randomisation", *BMJ*, vol. 316, no. 7130, 549.

300. Campbell, M., Grimshaw, J., and Steen, N. 2000, "Sample size calculations for cluster randomised trials. Changing Professional Practice in Europe Group (EU BIOMED II Concerted Action)", *Journal Of Health Services Research & Policy*, vol. 5, no. 1, 12-16.

301. Mazhindu, D. and Scott, I. 2005, "Questionnaires," in *Statistics for health care professionals: an introduction*, Scott, Ian and Mazhindu, Debbie, SAGE Publications, London, 27-38.

302. Ramsay, J., Campbell, J. L., Schroter, S., Green, J., and Roland, M. 2000, "The General Practice Assessment Survey (GPAS): tests of data quality and measurement properties", *Family Practice*, vol. 17, no. 5, 372-379.

303. Grol, R. and Wensing, M. 2000, *Patients evaluate general/family practice, the EUROPEP instrument* The EROPEP Group, Nijmegen.

304. Grol, R., Wensing, M., Mainz, J., Jung, H. P., Ferreira, P., Hearnshaw, H., Hjortdahl, P., Olesen, F., Reis, S., Ribacke, M., and Szecsenyi, J. 2000, "Patients in Europe evaluate general practice care: an international comparison", *British Journal of General Practice*, vol. 50, 882-887.

305. Safran, D. G., Kosinski, M., Tarlov, A. R., Rogers, W. H., Taira, D. H., Lieberman, N., and Ware, J. E. 1998, "The Primary Care Assessment Survey: tests of data quality and measurement performance", *Medical Care*, vol. 36, no. 5, 728-739.

306. Bower, P., Campbell, S., Bojke, C., and Sibbald, B. 2003, "Team structure, team climate and the quality of care in primary care: an observational study", *Quality and Safety in Health Care*, vol. 12, no. 4, 273-279.

307. Campbell, S., Steiner, A., Robison, J., Webb, D., Raven, A., Richards, S., and Roland, M. 2005, "Do Personal Medical Services contracts improve quality of care? A multi-method evaluation", *Journal Of Health Services Research & Policy*, vol. 10, no. 1, 31-39.

308. Roland, M. 2002, *General Practice Assessment Survey (GPAS-2) : manual.* National Primary Care Research and Development Centre, University of Manchester, Manchester.

309. Hardy, M. A. and Bryman, A. 2004, *Handbook of data analysis* London : Sage Publications.

310. Stange, K. C. and Miller, W. L. 2004, "In This Issue: The Patient Voice, Clinical Research, Clustered Data, and the Wonca Research Conference", *Annals of Family Medicine*, vol. 2, no. 3, 194-197.

311. Moher, M., Yudkin, P., Wright, L., Turner, R., Fuller, A., Schofield, T., and Mant, D. 2001, "Cluster randomised controlled trial to compare three methods of promoting secondary prevention of coronary heart disease in primary", *BMJ*, vol. 322, no. 7298, 1338.

312. Campbell, M. K. and Grimshaw, J. M. 1998, "Cluster randomised trials: time for improvement", *BMJ*, vol. 317, no. 7167, 1171-1172.

313. Reading, R., Harvey, I., and Mclean, M. 2000, "Cluster randomised trials in maternal and child health: implications for power and sample size", *Archives of Disease in Childhood*, vol. 82, no. 1, 79-83.

314. Peters, T. J., Richards, S. H., Bankhead, C. R., Ades, A. E., and Sterne, J. A. C. 2003, "Comparison of methods for analysing cluster randomized trials: an example involving a factorial design", *International Journal of Epidemiology*, vol. 32, no. 5, 840-846.

315. Wears, R. L. 2002, "Advanced Statistics: Statistical Methods for Analyzing Cluster and Cluster-randomized Data", *Academic Emergency Medicine*, vol. 9, no. 4, 330-341.

316. Everitt, B., Landau, S., and Leese, M. 2001, *Cluster analysis*, 4th ed / Brian S. Everitt, Sabine Landau, Morven Leese edn, London : Edward Arnold.

317. Lehtonen, R. and Pahkinen, E. J. 2004, *Practical methods for design and analysis of complex surveys*, 2nd edn, Chichester : Wiley.

318. Kreft, I. G. G. and De Leeuw, J. 1998, *Introducing multilevel modelling* London ; Thousand Oaks, Calif. : Sage.

319. Goldstein, H., University of London. Institute of Education. Bedford Group for, and Lifecourse and Statistical Studies 2003, *Multilevel statistical models*, 3rd edn, London : Arnold, 2003.

320. Vingerhoets, E., Wensing, M., and Grol, R. 2001, "Feedback of patients' evaluations of general practice care: a randomised trial", *Quality and Safety in Health Care*, vol. 10, no. 4, 224-228.

321. Sewitch, M. J., Leffondre, K., and Dobkin, P. L. 2004, "Clustering patients according to health perceptions: Relationships to psychosocial characteristics and medication no adherence", *Journal of Psychosomatic Research*, vol. 56, no. 3, 323-332.

322. Elwyn, G., Edwards, A., Hood, K., Robling, M., Atwell, C., Russell, I., Wensing, M., Grol, R., and the Study Steering Group 2004, "Achieving involvement: process outcomes from a cluster randomized trial of shared decision making skill development and use of risk communication aids in general practice", *Family Practice*, vol. 21, no. 4, 337-346.

323. Reed, J. F., III 2004, "Adjusted Chi-Square Statistics: Application to Clustered Binary Data in Primary Care", *Annals of Family Medicine*, vol. 2, no. 3, 201-203.

324. Donner, A. and Klar, N. 1996, "Statistical considerations in the design and analysis of community intervention trials", *Journal Of Clinical Epidemiology*, vol. 49, no. 4, 435-439.

325. Altman, D. G. 1991, *Practical statistics for medical research*, 1st edn, Chapman and Hall, London.

326. Browne, W. and Rasbash, J. 2004, "Multilevel Modelling," in *Handbook of Data Analysis*, Hardy, Melissa and Bryman, Alan, SAGE Publications Ltd, London, 459-479.

327. Hox, J. J. 1995, *Applied multilevel analysis*, 2nd edn, Amsterdam : TT-Publikaties.

328. Duncan, C., Jones, K., and Moon, G. 1998, "Context, composition and heterogeneity: Using multilevel models in health research", *Social Science & Medicine*, vol. 46, no. 1, 97-117.

329. Bartholomew, D. J., Steele, F., Moustaki, I., and Galbraith, J. I. 2002, *The Analysis and Interpretation of Multivriate Data for Social Scientists* Chapman & HALL/CRC, Boca Raton.

330. Katz, M. H. 2003, "Multivariable Analysis: A Primer for Readers of Medical Research", *Annals of Internal Medicine*, vol. 138, no. 8, 644-650.

331. Baker, R. and Streatfield, J. 1995, "What type of general practice do patients prefer? Exploration of practice characteristics influencing patient satisfaction", *Br J Gen Pract*, vol. 45, 654-659.

332. Hall, J. A. and Dornan, M. C. 1990, "Patient sociodemographic characteristics as predictors of satisfaction with medical care: A meta-analysis", *Social Science & Medicine*, vol. 30, no. 7, 811-818.

333. Jung, H. P., Baerveldt, C., Olesen, F., Grol, R., and Wensing, M. 2003, "Patient characteristics as predictors of primary health care preferences: a systematic literature analysis", *Health Expectations*, vol. 6, no. 2, 160-181.

334. Perneger, T. V. 2004, "Adjustment for patient characteristics in satisfaction surveys", *International Journal for Quality in Health Care*, vol. 16, no. 6, 433-435.

335. Campbell, J. L., Ramsay, J., and Green, J. 2001, "Age, gender, socioeconomic, and ethnic differences in patients' assessments of primary health care", *Quality and Safety in Health Care*, vol. 10, no. 2, 90.

336. Stata Corporation 2003, *Stata base reference manual: release 8* Stata Press, College Station, Texas.

337. Pallant, J. 2001, *SPSS Survival Manual* Open University Press, Buckingham.

338. National Primary Care Research and Development, T. U. o. M. GPAS Website. http://www.gpas.co.uk/ . 2003. Accessed on .25-10-2003.

339. Munro, B. H. 2001, *Statistical methods for health care research*, 4th edn, Lippincott Williams & Wilkins, Philadelphia.

340. Campbell, S. M., Hann, M., Hacker, J., Burns, C., Oliver, D., Thapar, A., Mead, N., Safran, D. G., and Roland, M. O. 2001, "Identifying predictors of high quality care in English general practice: observational study", *BMJ*, vol. 323, no. 7316, 784.

341. Hamilton, L. C. 2004, *Statistics with stata: updated for version 8*, Updated edn, Thomson/BrooksCole, Belmont, CA.

342. Margolis, S. A., Al-Marzouqi, S. U., Revel, T. O., and Reed, R. L. 2003, "Patient satisfaction with primary health care services in the United Arab Emirates", *International Journal for Quality in Health Care*, vol. 15, no. 3, 241-249.

343. Al-Shuaibi, Ali Mohammed 2002, *Fisheries and integrated environmental management : a case study of Saudi Arabia with special reference to the Saudi/Kuwait offshore neutral zone*, PhD Thesis, Cardiff University.

344. Fulcher, J. and Scott, J. 1999, *Sociology* Oxford University Press, Oxford.

345. Dhami, S. and Sheikh, A. 2000, "The family predicament and promise," in *Caring for Muslim Patients*, Sheikh, Aziz and Gatrad, Abdul Rashid, Radcliffe Medical Press Ltd, Abingdon, Oxon, 43-55.

346. Al-Shahri, M. Z. 2002, "Culturally Sensitive Caring for Saudi Patients", *Journal of Transcultural Nursing*, vol. 13, no. 2, 133-138.

347. Saeed, A. A., Mohammed, B. A., Magzoub, M. E., and Al-Doghaither, A. H. 2001, "Satisfaction and correlates of patients' satisfaction with physicians' services in primary health care centers", *Saudi Medical Journal*, vol. 22, no. 3, 262-267.

348. Wensing, M. and Richard, G. 1998, "What can patients do to improve health care?", *Health Expectations*, vol. 1, no. 1, 37-49.

349. Howie, J. G. R., Heaney, D., and Maxwell, M. 2004, "Quality, core values and the general practice consultation: issues of definition, measurement and delivery", *Family Practice*, vol. 21, no. 4, 458-468.

350. AlFaris, E. A., Khoja, T. A., Falouda, M., and Saeed, A. A. W. 1996, "Patients' satisfaction with accessibility and services offered in Riyadh health centers", *Saudi Medical Journal*, vol. 17, no. 1, 11-17.

351. BBC website. GPs demand more time with patients. http://news.bbc.co.uk/1/hi/health/2225316.stm :Accessed on . 26-4-2004.

352. Woelk, G. B. 1992, "Cultural and structural influences in the creation of and participation in community health programmes", *Social Science & Medicine*, vol. 35, no. 4, 419-424.

353. Enehaug, I. H. 2000, "Patient participation requires a change of attitude in health care", *International Journal of Health Care Quality Assurance*, vol. 13, no. 4, 178-181.

354. World Health Organization 1996, *Global Strategy for Health for All by the year 2000* World Health Organization, Geneva.

355. World Health Organization 1979, *ALMA-ATA 1978 Primary Health Care*, World Health Organization, Switzerland, Geneva, 1.

356. Niazi, A. D. and Al-Delaimi, A. M. 2003, "Impact of community participation on treatment outcomes and compliance of DOTS patients in Iraq", *Eastern Mediterranean Health Journal*, vol. 9, no. 4, 709-717.

357. Nelson, N. and Wright, S. 1995, "Participation and power," in *Power and Participatory Development: theory and practice*, Nelson, Nici and Wright, Susan, Intermediate Technology Publications, London, 1-18.

358. Al-Mazrou, Y. Y. and al-Shammari, S. 1991, "Community participation and attitudes of decision-makers towards community involvement in health development in Saudi Arabia", *Bulletin of the World Health Organization*, vol. 69, no. 1, 43-50.

359. el Shabrawy Ali, M. 1992, "A study of patient satisfaction as an evaluation parameter for utilization of primary health care services", *Journal Of The Royal Society Of Health*, vol. 112, no. 2, 64-67.

360. Al-Doghaither, A. H. and Saeed, A. A. 2000, "Consumers' satisfaction with primary health services in the city of Jeddah, Saudi Arabia", *Saudi Medical Journal*, vol. 21, no. 5, 447-454.

361. Fox, J. G. and Storms, D. M. 1981, "A Different Approach To Sociodemographic Predictors Of Satisfaction With Health Care", *Social Science & Medicine*, vol. 15A, 557-564.

362. McCoy, M. and Hargie, O. D. W. 2001, "Evaluating evaluation: implication for assessing quality", *International Journal of Health Care Quality Assurance*, vol. 14, no. 7, 317-327.

363. Baggott, R., Allsop, J., and Jones, K. 2005, *Speaking for patients and carers : health consumer groups and the policy process* Palgrave Macmillan, London.

364. Alford, R. R. 1975, *Health care politics : ideological and interest group barriers to reform* Chicago ; London : University of Chicago Press.

365. Banoob, S. N. 2001, "Global directions for reforming health systems and expanding insurance. What is suitable for the Arab Gulf countries?", *Saudi Medical Journal*, vol. 22, no. 9, 743-748.

366. Hunter, D. 2004, "A structural perspective on health care reform", *Journal Of Health Services Research & Policy*, vol. 9, no. 1, 51-53.

367. Linder-Pelz, S. 1982, "Towards A Theory Of Patient Satisfaction", *Social Science & Medicine*, vol. 16, 577-582.

368. World Health Organization 1981, *Global Strategy for Health for all by Year 2000*, World Health Organization, Switzerland, Geneva, 3.

369. House of Commons and Social Services Committee. Resourcing the National Health Service: the Government's White Paper; working for patients. http://www.bopcris.ac.uk/bopall/ref21702.html . 1989. BOPCRIS. Accessed on .9-4-2005.

370. Ovretveit, J. 2002, "Improving the quality of health services in developing countries: lessons for the West", *Quality and Safety in Health Care*, vol. 11, no. 4, 301-302.

371. Dawson, P. and Heyman, B. 1997, "Evaluating community health services: Conflict and controversy", *Health & Social Care in the Community*, vol. 5, no. 4, 255-260.

APPENDICES

APPENDIX (A)

SCHEDULE FOR INTERVIEWS WITH PATIENTS

The interview Schedule

The First few minutes of each interview will be devoted to:

1- Introducing the purpose of the study and the researcher.

2- Emphasising confidentiality and data protection. The researcher from Bristol University and all others involved in this research will assure all informants of total confidentiality of information elicited, including complete protection of any information gathered, which will be used for research purposes only. Each interviewee will receive a letter explaining the importance of this research to Saudi Arabian society, in particular the military sector. It will also state that participation is voluntary and informants will remain anonymous.

3- Obtaining the candidate's consent to participation in the study.

Interviewer: **Ibraheem (I)**

Interviewee: **No: (P……)**

Location:

Date:

Time:

Information about interviewee:

Gender:

Age:

Employment status: **Rank:**

Marital status:

Qualification (Saudi qualification names may be used):

1- GCSEs 2- A level 3- Degree 4-higher degree (M.Sc, PhD etc)

5- Other…… 6- no qualification

Interview schedule

Key

☒ Questions

✓ Prompt

General discussion

☒ What do you think of current primary care services provided by the MoI?

- ✓ How often do you visit the PHC centre? Why?
- ✓ What is your experience of the service
- ✓ What do you like about it? Why do you like it? Examples
- ✓ What do you dislike about it? Why? Examples

☒ What are general PHC services issues important to you?

- ✓ What do you think of PHC workers' record in this area? Is it O.K or you would like to see it handled differently?
- ✓ What do you think about your relationship with your doctor?
- ✓ What do you think of how your doctor handles the medical examination? Examples?
- ✓ What is important for you with regard to your relationship with your doctor?
- ✓ How could this relationship be improved?
- ✓ How would you compare MoI PHCs with other PHCs?

General introduction to quality

☒ What are your general views on the quality of PHC services provided by the MoI?

☒ What does quality mean to you?

- ✓ What is good quality to you? Examples?
- ✓ What is bad quality to you? Examples?

☒ What makes you feel that this service is good or bad in quality?

Which aspect (s) of quality do you value most? Why?

☒ Which aspect (s) do you think are not related to quality? Examples.

☒ What do you think of PHC workers' record with regard to PHCs' quality?

- ✓ Which aspect (s) do you think has more attention paid to it?
- ✓ Which aspect has less attention paid to it?
- ✓ What are your views about this?

- ✓ Which aspect (s) of care do you think deserves more attention? Why?

☒ Which is the most important aspect of quality in your view? Why?

Specific aspects of quality

3- What other aspect (s) of quality, in your view, are not available at PHC centres? What is your view about this?

☒ Can you give specific examples?

- ✓ How important are these aspects to you?
- ✓ Why do you think these aspects are not available?

☒ Can you please tell me your views on these issues:

- ✓ What is the most important aspect of quality? Why?
- ✓ What is the next important aspect of quality in your view? Why?
- ✓ What is less important to you? Why?
- ✓ From your experience, how do you compare MoI PHC centres' quality with that of other health care providers?

Proposed themes

1. Access

☒ Can you tell me your views on the PHC centres' appointment system?

- ✓ Do you find it difficult to access your doctor? Why?
- ✓ Do you have to wait a long time before you see a doctor?
- ✓ Can you see your doctor on the same day?
- ✓ What about in an emergency?

☒ What are your views about PHC working hours?

- ✓ Are they convenient? Why not?
- ✓ Do you think they should change? Why?
- ✓ What else would you like to add at this point?

☒ How do you link access with quality?

- ✓ Is it very important?
- ✓ What do you think can be added to improve access?

2. Receptionists

   - ☒ What are your views about PHC centre receptionists?
   - ☒ What do you expect from them? Why?
   - ☒ Do you link their performance to the quality of the PHC centre?
   - ☒ How important is the receptionists' role to you? Why?

3. Continuity of Care

   - ☒ What are your views about having a short or long relationship with your GP?
     - ✓ Why should it be a long relationship (or) short relationship (to develop a good relationship, understand my illness, etc.)
     - ✓ What do you think about current policy in this regard?
     - ✓ The removal of what obstacles or the introduction of what incentives do you think will improve the situation?
   - ☒ How do you link your relationship with your GP with quality?
   - ☒ How important is this aspect to you?

4. Communication

   - ☒ What are your views about communication sharing with your GP?
     - ✓ Good (bad) sharing of communication. Why?
     - ✓ Doctor listens to you?
     - ✓ Doctor shares information with you and consults you?
     - ✓ What do you think about decision-making?
     - ✓ How important is this to you?
     - ✓ How do link communication to quality?

5. Interpersonal Care

   - ☒ Could you describe the current interpersonal relationship that you have with your GP?
     - ✓ Do you think it is important or not important to have a good interpersonal relationship with your GP and why?
     - ✓ What makes a good interpersonal relationship?
     - ✓ What sort of relationship do you want with your GP?
     - ✓ How do you link the interpersonal relationship with your GP to quality?

6. Doctors' knowledge of patients

- ☒ What do you think your GP should know about you?
  - ✓ About your medical history?
  - ✓ Your problems and concerns?
  - ✓ About your work circumstances?
  - ✓ About your family?
- ☒ Do you think a doctor's knowledge of his/her patients is very important?
- ☒ How do you link this to quality?

7. Enablement

- ☒ Could you describe what makes you feel better after your medical consultation?
  - ✓ More information about how to use medication?
  - ✓ More details about your illness?
  - ✓ Thorough investigation?
  - ✓ Self-assurance?
  - ✓ Follow up appointment?
  - ✓ What things make you self enabled?
  - ✓ How do you link this to quality?

8. Referral to specialists

- ☒ What are your views about the current referral system?
  - ✓How important is referral to a specialist to you?
  - ✓Do you think referral is linked to quality?

9. Nursing care

- ☒ What do you think of nursing care at PHC centres?
  - ✓What is the relationship of the nursing care staff with you?
  - ✓Do they respect confidentiality of information?
  - ✓What other aspects of nursing care are you concerned about?
  - ✓How do you link their work to quality?

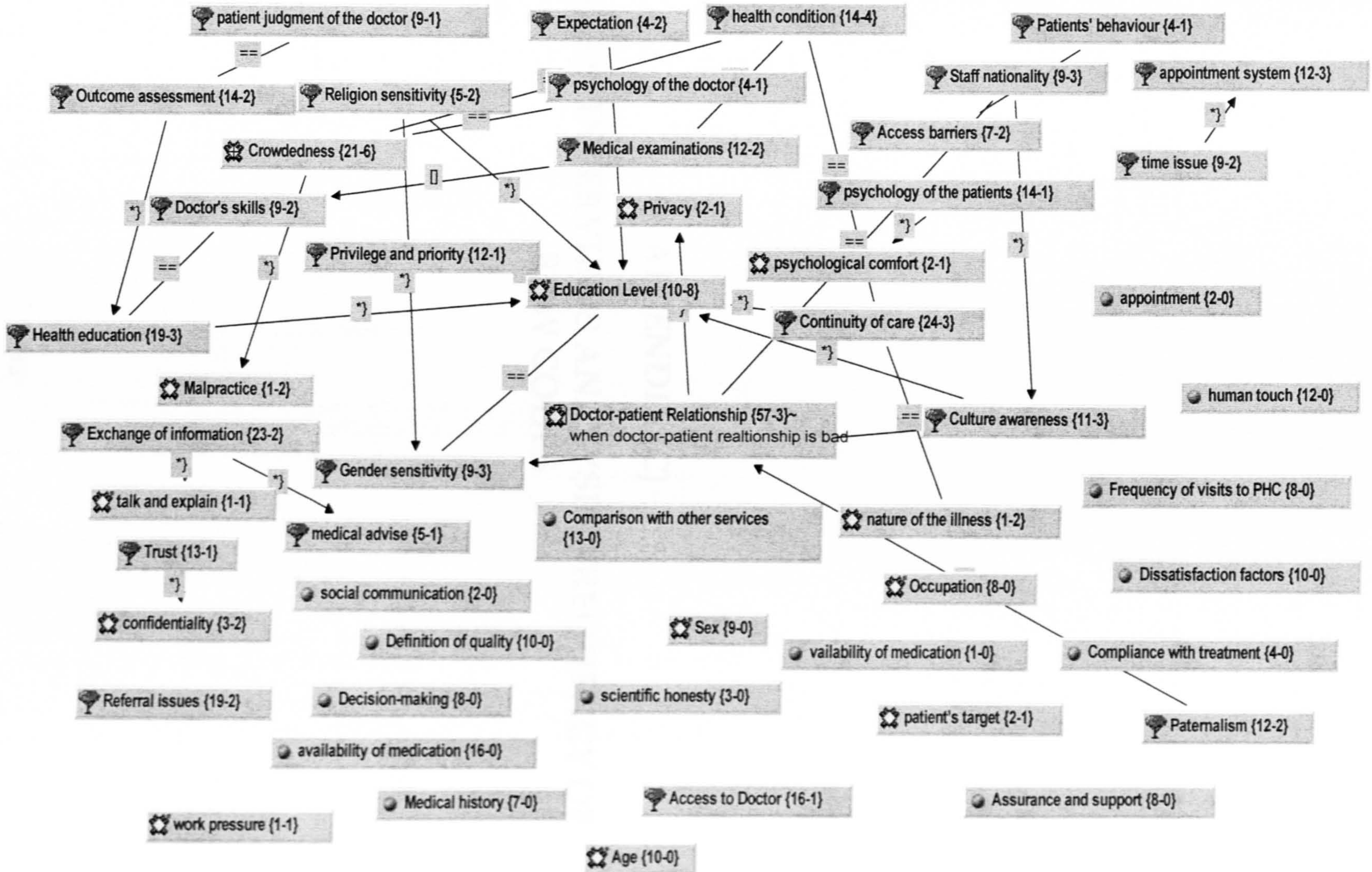
10. Overall satisfaction

- ☒ How would you describe your overall satisfaction?
- ☒ What other elements would make you feel more satisfied?
- ☒ What are the elements that make you feel dissatisfied?

Finally, what would you do to improve service quality if you were the manager of a primary care centre?

APPENDIX (B)

PATIENTS' INTERVIEWS ANALYSIS: VISUAL DIAGRAM SHOWING CONCEPTUAL LINK BETWEEN DIFFERENT CODES


patient judgment of the doctor {9-1}
Expectation {4-2}
health condition {14-4}
Patients' behaviour {4-1}
Staff nationality {9-3}
appointment system {12-3}
Outcome assessment {14-2}
Religion sensitivity {5-2}
psychology of the doctor {4-1}
Access barriers {7-2}
time issue {9-2}
Crowdedness {21-6}
Medical examinations {12-2}
Doctor's skills {9-2}
Privacy {2-1}
psychology of the patients {14-1}
Privilege and priority {12-1}
psychological comfort {2-1}
Education Level {10-8}
appointment {2-0}
Health education {19-3}
Continuity of care {24-3}
Malpractice {1-2}
human touch {12-0}
Doctor-patient Relationship {57-3}~
when doctor-patient realtionship is bad
Culture awareness {11-3}
Exchange of information {23-2}
Gender sensitivity {9-3}
Frequency of visits to PHC {8-0}
talk and explain {1-1}
Comparison with other services {13-0}
nature of the illness {1-2}
medical advise {5-1}
Trust {13-1}
Dissatisfaction factors {10-0}
Occupation {8-0}
social communication {2-0}
confidentiality {3-2}
Sex {9-0}
Definition of quality {10-0}
vailability of medication {1-0}
Compliance with treatment {4-0}
Referral issues {19-2}
Decision-making {8-0}
scientific honesty {3-0}
patient's target {2-1}
Paternalism {12-2}
availability of medication {16-0}
Medical history {7-0}
Access to Doctor {16-1}
Assurance and support {8-0}
work pressure {1-1}
Age {10-0}

APPENDIX (C)

PATIENTS' INTERVIEWS ANALYSIS: FREQUENCY OF RAW CODES

Primary codes	Frequencies
Access barriers	7
Access to Doctor	16
Appointment	2
Appointment system	12
Assurance and support	8
Availability of equipment	8
Availability of medication	17
Availability of specialists	12
Capabilities	11
Cleanliness	4
Community participation	10
Comparison with other sectors	13
Compliance with treatment	4
Confidentiality	3
Continuity of care	24
Coordination	1
Overcrowding	21
Cultural awareness	11
Customer service	1
Decision-making	8
Definition of quality	10
Dissatisfaction factor	10
Doctor's skills	9
Doctor-patient Relationship	57
Ease of receiving medication	2
Eligibility for access	3
Emergency cases	2
Evaluation process	1
Exchange of information	23
Expectation	4
Family doctor	3
Frequency of visits	8
Gender sensitivity	9
Health condition	14
Health education	19
Human touch	12
Integrated staff	4
Location	3
Malpractice	1
Management and organisation	11
Medical advice	5
Medical examinations	12
Medical history	7

Medical staff attitude	31
Nurse's efficiency	7
Nurses	11
Outcome assessment	14
Overall views of PHC	10
Paternalism	12
Patient judgment of doctor	9
Patient's target	2
Patients' behaviour	4
Primary Care Role	8
Priority of service	6
Privacy	2
Privilege and priority	12
Process	1
Psychological comfort	2
Psychology of the doctor	4
Psychology of the patient	14
Quality factors	32
Receptionist	13
Referral issues	19
Religious sensitivity	5
Satisfaction factors	22
Scientific honesty	3
Social communication	2
Staff development	5
Staff nationality	9
Talk and explain	1
The building	5
Time issue	9
Trust related issues	13
Views to improve service	12
Waiting area	9
Work pressure	1
Working hours	7
Totals	529

Atlas.ti output showing codes and conceptual links with other codes

HU: English-Transcripts

File:[C\:Documents and Settings\ibraheem\Desktop\Ibraheem PhD\Finished WORK\Chapter 3 Methodology\Transcript English\English-Transcripts-2003[Edited by: Ibraheem's work

Date/Time: 14/06/03 01:31:14 AM

Codes hierarchy

Code-Filter: All

Access to Doctor <is> Root

  Overall views of PHC <is property of> Access to Doctor

Appointment <is> Root

Appointment system <is> Root

  Eligibility for access <is associated with> appointment system

  Satisfaction factors <is associated with> appointment system

    Availability of the medical expertise <is associated with> Satisfaction factors

  Time issue <is property of> appointment system

Assurance and support <is> Root

Availability of equipment <is> Root

Availability of medication <is> Root

Categories for the workers <is> Root

Cleanliness <is> Root

Comparison with other services <is> Root

Compliance with treatment <is> Root

Confidentiality <is> Root

  Satisfaction factors <is associated with> confidentiality

    Availability of the medical expertise <is associated with> Satisfaction factors

  Trust <is property of> confidentiality

Coordination <is> Root

  Nurses <is property of> coordination

  Quality factors <is property of> coordination

  Referral issues <is property of> coordination

    Satisfaction factors <is associated with> Referral issues

      Availability of medical expertise <is associated with> Satisfaction factors

Customer service process <is> Root

Satisfaction factors <is property of> customer service process

Availability of medical expertise <is associated with> Satisfaction factors

Decision-making <is> Root

Definition of quality <is> Root

Dissatisfaction factors <is> Root

Ease of receiving medication <is> Root

Emergency cases <is> Root

Expectation <is> Root

Capabilities <is property of> Expectation

Family doctor <is> Root

Frequency of visits to PHC <is> Root

Gender sensitivity <is> Root

Cultural awareness <is property of> Gender sensitivity

Staff nationality <is property of> Cultural awareness

Doctor-patient Relationship <is associated with> Staff nationality

Satisfaction factors <is property of> Staff nationality

Availability of medical expertise <is associated with> Satisfaction factors

Religion sensitivity <is property of> Gender sensitivity

Health education <is> Root

Doctor's skills <is associated with> Health education

Medical examinations <is part of> Doctor's skills

Health condition <is associated with> Medical examinations

Overcrowding <is associated with> health condition

Eligibility for access <is associated with> Overcrowding

Outcome assessment <is property of> Health education

Human touch <is> Root

Integrated staff <is> Root

Overcrowding <is associated with> integrated staff

Eligibility for access <is associated with> Overcrowding

Location <is> Root

Malpractice <is> Root

Overcrowding <is property of> Malpractice

Eligibility for access <is associated with> Overcrowding

Quality factors <is part of> Malpractice

Management and organisation of the service <is> Root

Access barriers <is associated with> Management and organisation of the service

Medical advice <is> Root

Exchange of information <is property of> medical advice

Medical history <is> Root

Medical staff attitude <is> Root

Medical staff attitude and performance <is> Root

Nature of illness <is> Root

Continuity of care <is associated with> nature of illness

Health condition <is associated with> Continuity of care

Overcrowding <is associated with> health condition

Eligibility for access <is associated with> Overcrowding

Quality factors <is property of> nature of illness

Nurse's efficiency <is> Root

Quality factors <is property of> nurse's efficiency

Patient judgment of the doctor <is> Root

Outcome assessment <is associated with> patient judgment of the doctor

Patient's target <is> Root

Satisfaction factors <is associated with> patient's target

Availability of medical expertise <is associated with> Satisfaction factors

Patients' behaviour <is> Root

Access barriers <is associated with> Patients' behaviour

Primary Care Role <is> Root

Overcrowding <is associated with> Primary Care Role

Eligibility for access <is associated with> Overcrowding

Health condition <is property of> Primary Care Role

Paternalism <is associated with> Primary Care Role

Satisfaction factors <is associated with> Primary Care Role

Availability of medical expertise <is associated with> Satisfaction factors

priority of service <is> Root

privacy <is> Root

Doctor-patient Relationship <is property of> Privacy

Privilege and priority <is> Root

Process <is> Root

Community participation <is property of> process

Evaluation process <is property of> process

Psychological comfort <is> Root

Psychology of the patients <is property of> psychological comfort

Psychology of the doctor <is> Root

Overcrowding <is associated with> psychology of the doctor

Eligibility for access <is associated with> Overcrowding

Scientific honesty <is> Root

Social communication <is> Root

Staff development <is> Root

Talk and explain <is> Root

Exchange of information <is property of> talk and explain

The building <is> Root

Availability of medication <is> Root

Views to improve service quality <is> Root

Waiting area <is> Root

Satisfaction factors <is property of> waiting area

Availability of medical expertise <is associated with> Satisfaction factors

Work pressure <is> Root

Receptionist <is property of> work pressure

Working hours <is> Root

|HU: English-Transcripts

File: [C\:Documents and Settings\Ibraheem\Desktop\Ibraheem PhD\Finished WORK\Chapter 3 Methodology\Transcript English\English-Transcripts-2003[

Edited by: Ibraheem's work

Date/Time: 15/06/03 04:03:38 AM

Code-Filter: All

!---

Grouping codes into categorical codes

1-Access issues

Access barriers

Access to Doctor

Appointment

Appointment system

Overcrowding

Eligibility for access

Emergency cases

Location

Privilege and priority

Time issue

Working hours

2-Community participation

3-Comparison with other services

4-Culture awareness

5-Evaluation of the service

Customer service process

Quality factors

Views to improve service quality

Overall views of PHC

Definition of quality

Dissatisfaction factors

Social communication

Ease of receiving medication

Evaluation process

Expectation

Frequency of visits to PHC

Occupation

Primary Care Role

Patients' behaviour

Priority of service

Satisfaction factors

6- Outcome assessment

Health condition

Nature of illness

Education Level

Patient's target

Psychological comfort

7-Doctor-patient Relationship

Doctor's skills

Decision-making

Compliance with treatment

Confidentiality

Continuity of care

Assurance and support

Exchange of information

Human touch

Malpractice

Paternalism

Medical examinations

Talk and explain

Medical advice

Medical history

Family doctor

Patient's judgment of the doctor

Trust

Work pressure

Scientific honesty

Psychology of the patients

Health education

Nature of illness

Privacy

Psychology of the doctor

8-Gender sensitivity

8-Medical staff attitude and performance

Medical staff attitude

Nurse's efficiency

Nurses

Receptionist

Coordination

9-Management and organisation of the service

Integrated staff

Capabilities

Staff development

Staff nationality

Process

Availability of equipment

Availability of medication

Availability of medication

Availability of medical expertise

Categories for workers

10-Referral issues

11-Religion sensitivity

13-Physical structure

The building

Waiting area

Cleanliness

14- Psychological and emotional issues

Psychological comfort

Psychology of the doctor

Psychology of the patient

APPENDIX (D)

LISTS OF ITEMS MAKING UP EACH DOMAIN IN THE EXTENDED VERSION OF THE GPAS, AND SCALES RELIABILITY COEFFICIENTS

Domain	Questions
Access*	3- How do you rate the convenience of your primary care centre's location? 5a- How do you rate the hours that your primary care centre is open for appointments? 6b- Thinking of times when you want to see a particular doctor, how do you rate this? 7b- Thinking of times when you are willing to see any doctor, how do you rate this? 8- If you need to see a GP urgently, can you normally get seen on the same day? 9b- How long do you usually have to wait at the practice until your consultation begins? How do you rate this? 10a- Ability to get through to the practice on the phone? 10b- Ability to speak to a doctor on the phone when you have a question or need medical advice?
Receptionists*	4- How do you rate the way you are treated by receptionists at your primary care centre?
Continuity*	12b- In general, how often do you see your usual doctor? How do you rate this?
Communication*	13a- How thoroughly does your doctor ask about your symptoms and how you are feeling? 13b- How well does your doctor listen to what you say? 13c- How well does your doctor explain your health problems or any treatment that you need? 14- How often do you leave your doctor's surgery with unanswered questions?
Interpersonal care*	15a- The amount of time your doctor spends with you? 15b- The doctor's patience with your questions or worries? 15c- The doctor's care and concern for you?
Knowledge of patient*	17a- Your doctor's knowledge of your medical history? 17b- Your doctor's knowledge of what worries you most about your health? 17c- Your doctor's knowledge of your responsibilities at home, work or school?
Referral to specialists*	18b- In the past 12 months, has there been a time when you thought you needed to see a specialist? Did your doctor send you to see one?
Enablement*	After a visit to your usual doctor would you say that you generally feel: 19a- able to understand your problem(s) or illness? 19b- able to cope with your problem(s) or illness? 19c- able to keep yourself healthy?
Practice nursing*	Thinking about the nurses you have seen, how do you rate the following: 22a- How well do they listen to what you say? 22b- The quality of care they provide? 22c- How well do they explain your health problems or any treatment that you need?
Psychological issues	Thinking about your psychological welfare, how do you rate the following: 16a- How well does your doctor understand you're psychological needs?

	16b- How much does your doctor help you in dealing with your emotional problems?
Religious and Cultural issues	23a- Does your doctor speak to you with respect? 23b- Does your doctor speak to you in a language you can understand?? 23c- Do the nurses speak to you with respect? 23d- Do the nurses speak to you in a language you can understand? 23e- Do the receptionists speak to you with respect? 23f- Do the receptionists speak to you in a language you understand? 23g- Does your doctor show concern for your religious obligations? 23h-Are your wishes respected about seeing a doctor of the same gender as yourself?
Organisation of services and availability of medication	Thinking about the range of services and the organisation, how do you rate the following: 24a- Provision of prescribed medication 24b- The availability of specialists at the health care centre 24c- Organisation and comfort of the waiting area 24d- Cleanliness of the primary health care building
Community Participation	Thinking about community participation, how do you rate: 25a- The involvement of this health care centre in the local community 25b- The extent to which the health centre informs the local community about its activities 25c- The role of the health centre in promoting the health of the local population
Satisfaction*	26- All things considered, how satisfied are you with your practice?

* Source: GPAS scales were cited from: Roland M. 2002, *General Practice Assessment Survey (GPAS-2): manual*. National Primary Care Research and Development Centre, University of Manchester, Manchester.

Scales reliability coefficients: Cronbach's alpha results for piloted and main survey questionnaires

Scale	Items in scales (questions)	Scale reliability coefficient (Cronbach's alpha)			
		Pilot phase	n	Main survey	n
Access	3, 5a, 6b, 7b, 8, 9b, 10a, 10b	0.68	24	0.84	860
Communication	13a, 13b, 13c, 14	0.62	24	0.80	840
Interpersonal care	15a, 15b, 15c	0.93	24	0.91	840
Knowledge of the patient	17a, 17b, 17c	0.89	24	0.89	833
Enablement	19a, 19b, 19c	0.82	24	0.87	790
Nursing care	22a, 22b, 22c	0.96	24	0.93	
Psychological issues	16a, 16b	0.96	24	0.91	621
Religion and cultural issues	23a, 23b, 23c, 23d, 23e, 23f, 23g, 23h	0.92	24	0.92	866
Organisation of services	24a, 24b, 24c, 24d	0.75	24	0.86	866
Community participation	25a, 25b, 25c	0.64	24	0.89	861

SAMPLE SIZE CALCULATION

Having identified statistical implications attached to cluster sampling, sample size determination must reflect these statistical requirements. In this respect, Underwood et al. indicate, "Randomisation by practice [cluster sampling] can have a large effect on sample size requirements.... This has not always been taken into account in published trials" (Underwood et al., p.1089[319]). In evaluation studies, the statistical approach used to determine sample size is the power calculation.[16] The power calculation is the probability that a study of a given sample size will be able detect a real difference between groups of a given magnitude, if it exists.[17]

The power of a study is statistically referred to as 1- Beta $(1-\beta)$. Beta is the probability of obtaining a type 2 error which is failing to detect a difference which does in fact exist. Therefore, a Beta of 0.2 gives a power of 0.8 which means that the study has an 80% probability of detecting a difference at a given level of statistical significance (usually 5%) if such a difference does in reality exist. Bowling defines the power of a study as "a measure of how likely the study is to produce a statistically significant result for a difference between groups of a given magnitude.... The probability that a test will produce a significant difference at a given level of significance is called the power of the test" (Bowling, p.167[265]). The power of the study therefore depends on three elements: the true difference between the population compared, sample size, and the significance level chosen. The higher the significance level, the more likely a significance difference will be detected.[312,326]

In order to determine the power, we need to calculate the difference between sample means by estimating the difference between the populations' two means. Therefore, if we have two arms, and each consists of 6 clusters, and we want to detect a difference of 30% vs. 70% of satisfied patients using a confidence interval of 95% and 90% power, than we will need 233 samples to be able to detect a significance difference between the two groups. The following equation explains this process:

$$\frac{\left[(SD\ )^2+(SD)^2\right]\times\left(Z_{\alpha\ /\ 2}+Z_{\beta}\right)^2}{(SE\pm.95)}/(SE\pm0.95)$$

Where:

- Standard deviation (SD) = 1
- Using relevant statistical tables for critical values (see Kanji, pp. 159-212[327]): we know:
- $\alpha = 5\% = 0.05$

- $Z_{\alpha/2} = 1.95$
- $1-\beta = .90 = 90\%$ power= 1.28
- Confidence $\pm .95 = 0.3$
- Therefore:
- $$\frac{\left[(1)^2+(1)^2\right]\times\left(1.95+1.28\right)^2}{0.3}/0.3 = 116.64$$

Therefore n = 116.64 for one arm. We multiply (n) by 2 for two arms (MoI and MoH) which gives n= 223. However, it is important to note that sample size given here has to be *inflated* by the design effect to address loss of power posed by the clustered nature of the population. The next section discusses the design effect calculation.

Sample size calculation and adjusting for clustering effect

Using the following equation (Bland, p 345[312]):

- $DEFF = 1+(m-1)\times ICC$
- DEFF= is the design effect
- M = is the average cluster size per cluster which is 72
- ICC = we know from published literature that the ICC value ranges from 0.01-0.15 and 0.01 is assumed to be realistic.
- Using the above equation gives <u>DEFF= 1.7116</u>
- We have two arms (MoI and MoH)
- We have 6 clusters in each arm
- We know that the sample size needed without adjusting for cluster is (n= 233)

To calculate the sample size needed and adjusting for clustering, we simply multiply the design effect (DEFF) by the sample size that would have been needed if clustering were not required.

Therefore, the sample size needed is: 1.7116X 233= 399 in each arm and =798 for both arms. However, the pilot study showed the non-response rate was ≅ 20% and therefore a compensation of 20 %(159.6) is added to the 798, making a final sample size of 957.6 samples (≅ 79 per cluster).

Formulae used to calculate scales

All the GPAS scales , including the new added scales, are calculated by aggregated the scores of the items under each scale. Although all GPAS scale items use a six-point response format, ranging from 'very poor' to 'excellent', the final score of each scale is presented as a percentage of the maximum possible score, ranging from zero (the lowest possible score) to 100 (the highest possible score). In order to convert the six-point response format to a percentage figure the following formula is used in the GPAS manual:

$$\text{Scale score} = \frac{(\text{mean score of completed items - lowest possible item value}) \times 100}{(\text{Maximum item range})}$$

The following example from the GPAS manual demonstrates how scales are calculated. The final score for the 'access scale' is calculated according to the following method :

The access scale has eight variables or items (see table below) which are:

Item number in GPAS questionnaire	variable name
3	Location
5a	Hours
6b	Practic2
7b	Anydoc2
8	Urgent
9b	Waitrate
10a	Phone1
10b	Phone2

If a patient's answers were as follow:

Item number in GPAS questionnaire	Patient answers
3	patient ticked box (3), which is 'fair'
5a	patient ticked box (4), which is 'good'
6b	patient ticked box (5), which is 'v.good'
7b	patient ticked box (4) ,which is 'good'
8	Missing
9b	patient ticked box (4) , which is 'good'
10a	patient ticked box (4) , which is 'good'
10b	patient ticked box (4) , which is 'good'

According to the GPAS manual, the final score for this scale, and other scales, should be calculated as follows:

- Any items out of range? – In this case no

- Any item requiring recoding/ recalibration? In this example- no

- Can scale score be calculated? Yes- there are seven completed items.

- Mean score of completed items= 4

- Lowest possible item value=1

- Maximum item range= 5

Scale score= $\frac{(4-1)\ x100}{5}$ =60

Therefore, the final access scale score is 60. However, for scaling purposes, before applying scales to this formula, it is crucial for some scales to be recoded and recalibrated. For instance, all items which include in their response format 'does not apply' or 'don't know (questions: 6b, 7b, 10, a, 10b, 19a-c) have to be recoded for calculating the scale value and should be recorded as missing. For a full list of scales which require recoding and recalibrating (see the GPAS manual, pp.61-68.)

APPENDIX (E)

INTERVIEW SCHEDULE WITH PRIMARY HEALTH CARE CENTRE POLICYMAKERS, MANAGERS, AND DOCTORS

Interview Schedule

The first few minutes of each interview will be devoted to:

4- Introducing the informant to the purpose of the study and the researcher.

5- Emphasising confidentiality and data protection. The researcher from Bristol University and all others involved in this research will assure all participants of the total confidentiality of information elicited, including complete protection of any information gathered, which will be used for research purposes only. Each interviewee will receive a letter explaining the importance of this research to Saudi Arabian society, in particular the military section. It will also state that participation is voluntary and informants will remain anonymous.

6- Obtaining the candidate's consent to participation in the study.

Interviewer: **Mr. Ibraheem Al-Hosan (PhD Student)**

Interviewee: **No:**

Location:

Date:

Time:

Information about interviewee:

Gender:

Age:

Employment status:

Rank/Grade: **1- Doctor** **2- Local Manager** **3- District Manager**

4- Policymaker (administrator)

Marital status:

Qualification:

1- Primary education 2- Secondary education 3-university degree

4-higher degree (M.Sc, PhD, etc.) 5- Other..... 6- no qualification

Interview Schedule

- Main question

✓ Probing questions

Views of patients' needs, wants and preferences

- Generally speaking, what is the role of primary health care centres for patients?

✓ What are the services that the health centre is expected to provide to patients?

✓ Of all services provided, what are the most needed?

✓ Of all services provided, what are the least needed?

✓ From your experience, what do patients want from their primary health care centre?

✓ Why do they choose to visit a particular centre?

✓ Do they have any other choice (s)?

- Do you take patients' views into account?

✓ Do you consider patients' suggestions and views when planning future policies?

✓ Are the plans centred on patients' feedback about the service?

✓ Are the plans enhanced to benefit from patients' feedback about the service?

✓ How do you receive patients' views? Suggestion box, mail, personally, from workers (i.e. receptionists, nurses, doctors, and other staff).

✓ Do you review patients' comments on the service on a regular basis?

✓ Is it easy for patients to gain access to the manager or senior workers in the centre?

✓ Do you have patients' groups in your healthcare centre?

✓ How do you deal with personal problems?

✓ What do you expect patients to do if their suggestions and needs are not met?

- How do you act on patients' views?

  ✓ Do you personally investigate issues raised by patients?

  ✓ Do you allocate a committee to resolve a problem?

  ✓ Do you delay solving the problem until other concerns arise?

  ✓ Do you evaluate the problem on your own initiative and decide how to actively resolve it?

  ✓ Have you ever considered consulting other managers to share their experience?

- What are the barriers to meeting patients' needs?

- ✓ Is there an economic barrier to meeting patients' needs?
- ✓ Is there a social barrier to meeting patients' needs?
- ✓ Are there bureaucratic barriers, i.e. governmental?
- ✓ What are the procedures undertaken by your administration to overcome these barriers?
- ✓ Can patients themselves be considered to be barriers? How?
- ✓ Do patients' background, educational level, age, sex, and military rank contribute to the barriers?

- What are the incentives?
  - ✓ Do you receive compliments from patients when introducing new services?
  - ✓ Do statistics show any improvement in the centre's performance after introducing new services or improving others as a result of a patients' comments or suggestion?
  - ✓ Is there any kind of competition between primary health care centres or acknowledgement of the manager's achievements?
  - ✓ Is your promotion dependent upon your achievements?
  - ✓ Is your salary affected by your performance?
- What would be the best method to manage primary health care centres successfully?
  - ✓ Is there any kind of national guideline for the management of primary health care centres?
  - ✓ Do you have some flexibility in applying policies in the centre?
  - ✓ Do you need permission in order to change how things work in the centre?
  - ✓ Given the current situation and resources, what would be the best way to manage the centre and please the patients?

Finally, what do you think patients need to improve the quality of service?

APPENDIX (I)

UNIVARIATE AND MULTIVARIATE ANALYSIS FOR ALL QUALITY SCALES

Access scale	Adjusted for clustering effect using random effect model					
	MoI			MoH		
	Co-efficient (CI 95%	P-value	P-value*	Co-efficient (CI 95%	P-value	P-value*
Age groups						
18-24	1.00	0.5427	0.0412	1.00	0.4498	0.8569
25-34	2.22 (-2.48,6.92)			-3.22 (-7.27,0.83)		
35-44	3.34 (-1.87,8.55)			-1.59 (-5.92,2.74)		
45+	3.58 (-2.22,9.38)			-0.76 (-5.84,4.33)		
Sex						
Male	1.00	0.063	0.601	1.00	<0.001	0.079
Female	4.59 (-.254, 9.43)			5.66 (2.57, 8.75)		
Education						
Primary education or less	1.00	0.0006	0.0249	1.00	<0.001	0.0638
Intermediate-Second Edu.	-8.92 (-14.92, -2.91)			-3.28 (-9.24,2.67)		
Some University Edu. or higher	-12.42 (-18.75, -6.10)			-9.66 (-15.57, -3.76)		
Employment- military						
Private- Sergeant major	1.00	0.3195	0.1550			
Lieutenant- Colonel	-2.52 (-8.76,3.72)					
Brigadier- Major General	1.72 (-6.85,10.29)			Collinearity		
Retired military	-12.70 (-31.21,5.81)					
Military student /Cadet	-5.82 (-13.30,1.65)					
Employment-civilian						
Governmental employee	1.00	0.3140	0.9869	1.00	0.0001	0.3030
Retired	4.66 (-14.42,23.74)			-2.48 (-10.20,5.25)		
Private sector employee	-3.05 (-18.62,12.53)			-4.61 (-10.04,0.83)		
Housewife	8.57 (0.09,17.05)			5.85 (1.30,10.40)		
Student	6.68 (-2.89,16.25)			7.71 (3.02,12.39)		
Unemployed	6.32 (-2.17,14.80)			2.34 (-2.45,7.12)		
Overall health status						
Poor	1.00	0.0001	0.0008	1.00	0.3609	0.7524
Fair	7.01 (-7.41,21.44)			-6.56 (-14.71,1.59)		
Good	12.16 (-1.72,26.05)			-7.02 (-14.80,0.75)		
Very good	19.75 (5.97,33.52)			-6.63 (-14.30,1.04)		
Chronic or longstanding illness						
Yes	1.00	0.710	0.179	1.00	0.193	0.266
No	.863 (-3.69, 5.41)			-2.41(-6.06, 1.22)		
Transport to PHC						
Public transport (bus etc)	1.00	0.727	0.675	1.00	0.377	0.539
Private transport (car, etc)	-.845 (-5.59, 3.90)			-2.03 (-6.53, 2.47)		
Marital status						
Married	1.00	0.459	0.174	1.00	0.221	0.667
Not Married	1.60 (-2.64, 5.86)			2.04 (-1.22, 5.31)		

Receptionists' care scale	Adjusted for clustering effect using random effect model					
	MoI			MoH		
	Co-efficient (CI 95%	P-value	P-value	Co-efficient (CI 95%	P-value	P-value
Age groups						
18-24	1.00	0.3164	0.7757	1.00	0.1614	0.2233
25-34	2.47 (-3.27,8.21)			0.44 (-5.00,5.89)		
35-44	5.47 (-0.89,11.83)			4.88 (-0.96,10.72)		
45+	5.15 (-1.94,12.24)			-2.36 (-9.21,4.49)		
Sex						
Male	1.00	0.808	0.670	1.00	0.723	0.968
Female	.733 (-5.18, 6.64)			-.820 (-5.35, 3.71)		
Education						
Primary education or less	1.00	0.0116	0.0708	1.00	0.3097	0.1150
Intermediate-Second Edu.	-7.87 (-15.25, -0.48)			-4.85 (-12.98,3.28)		
Some University Edu. Or higher	-11.76 (-19.54, -3.99)			-6.28 (-14.41,1.85)		
Employment- military						
Private- Sergeant major	1.00	0.5058	0.1893			
Lieutenant- Colonel	-3.17 (-11.15,4.81)					
Brigadier- Major General	2.65 (-8.28,13.58)					
Retired military	-2.24 (-25.91,21.44)					
Military student /Cadet	-7.49 (-16.95,1.97)					
Employment-civilian						
Governmental employee	1.00	0.5937	0.5257	1.00	0.3168	0.2395
Retired	-5.11 (-27.92,17.70)			-4.96 (-15.51,5.59)		
Private sector employee	2.51 (-15.83,20.85)			-3.20 (-10.60,4.21)		
Housewife	4.05 (-5.86,13.97)			-5.29 (-11.68,1.11)		
Student	-1.57 (-12.86,9.71)			2.10 (-4.29,8.49)		
Unemployed	-4.84 (-14.94,5.27)			-0.09 (-6.65,6.48)		
Overall health status						
Poor	1.00	0.2711	0.8263	1.00	0.6901	0.5963
Fair	3.09 (-15.07,21.24)			-3.36 (-14.37,7.66)		
Good	3.97 (-13.48,21.41)			0.26 (-10.22,10.75)		
Very good	7.99 (-9.32,25.30)			-0.28 (-10.65,10.09)		
Chronic or longstanding illness						
Yes	1.00	0.480	0.588	1.00	0.931	0.713
No	-1.98 (-7.50, 3.52)			-.221 (-5.21, 4.76)		
Transport to PHC						
Public transport (bus etc)	1.00	0.750	0.518	1.00	0.145	0.062
Private transport (car, etc)	.945 (-4.85, 6.75)			-4.52 (-10.62, 1.56)		
Marital status						
Married	1.00	0.986	0.464	1.00	0.641	0.563
Not Married	.0460 (-5.120, 5.21)			1.06 (-3.39, 5.51)		

Continuity of care scale	Adjusted for clustering effect using random effect model			
	MoI		MoH	
	Co-efficient (CI 95%	P-value	Co-efficient (CI 95%	P-value
Age groups				
18-24	1.00		1.00	
25-34	4.15 (-1.81,10.10)	0.5641	-0.05 (-5.51,5.42)	0.7168
35-44	1.68 (-4.87,8.23)		0.55 (-5.32,6.42)	
45+	3.22 (-4.10,10.53)		-3.34 (-10.27,3.59)	
Sex				
Male	1.00	0.172	1.00	0.185
Female	4.18 (-1.82, 10.19)		3.10 (-1.48, 7.70)	
Education				
Primary education or less	1.00		1.00	
Intermediate-Second Edu.	-11.77 (-19.44, -4.10)	0.0095	1.36 (-6.85,9.57)	0.5157
Some University Edu. Or higher	-8.34 (-16.40, -0.29)		-1.20 (-9.35,6.95)	
Employment- military				
Private- Sergeant major	1.00			
Lieutenant- Colonel	1.70 (-6.01,9.40)			
Brigadier- Major General	9.09 (-1.32,19.51)	0.0156		
Retired military	-16.64 (-39.24,5.97)			
Military student /Cadet	-12.47 (-22.43, -2.51)			
Employment-civilian				
Governmental employee	1.00		1.00	
Retired	-0.52 (-23.80,22.76)		-1.57 (-12.11,8.98)	
Private sector employee	12.61 (-6.62,31.84)	0.2028	-0.29 (-7.83,7.25)	0.4742
Housewife	13.07 (2.24,23.90)		0.14 (-6.15,6.43)	
Student	7.57 (-4.43,19.58)		5.63 (-0.83,12.10)	
Unemployed	11.78 (1.10,22.45)		3.22 (-3.35,9.79)	
Overall health status				
Poor	1.00		1.00	
Fair	15.86 (-2.13,33.85)	<0.001	-3.44 (-14.60,7.71)	0.9070
Good	23.12 (5.84,40.40)		-1.73 (-12.35,8.89)	
Very good	29.70 (12.52,46.88)		-1.60 (-12.10,8.91)	
Chronic or longstanding illness				
Yes	1.00	0.888	1.00	0.688
No	-.408 (-6.11, 5.29)		1.016 (-3.94, 5.97)	
Transport to PHC				
Public transport (bus etc)	1.00	0.318	1.00	0.540
Private transport (car, etc)	3.08 (-2.96, 9.13)		1.90 (-4.19, 8.00)	
Marital status				
Married	1.00	0.324	1.00	0.077
Not Married	-2.72 (-8.13, 2.68)		3.96 (-.434, 8.36)	

Communication scale	Adjusted for clustering effect using random effect model			
	MoI		MoH	
	Co-efficient (CI 95%	P-value	Co-efficient (CI 95%	P-value
Age groups				
18-24	1.00		1.00	
25-34	1.67 (-3.39,6.73)	0.8127	-1.57 (-5.95,2.81)	0.5026
35-44	2.69 (-2.90,8.28)		1.56 (-3.14,6.26)	
45+	1.86 (-4.39,8.10)		-1.65 (-7.15,3.86)	
Sex				
Male	1.00	0.002	1.00	<0.001
Female	7.63 (2.71,12.55)		7.97 (4.68, 11.27)	
Education				
Primary education or less	1.00		1.00	
Intermediate-Second Edu.	-9.65 (-16.11, -3.20)	0.0134	0.85 (-5.80,7.51)	0.0193
Some University Edu. Or higher	-8.26 (-15.03, -1.49)		-4.09 (-10.70,2.51)	
Employment- military				
Private- Sergeant major	1.00			
Lieutenant- Colonel	1.09 (-5.89,8.07)			
Brigadier- Major General	4.86 (-4.58,14.30)	0.2446		
Retired military	-7.21 (-27.72,13.31)			
Military student /Cadet	-8.06 (-16.84,0.73)			
Employment-civilian				
Governmental employee	1.00		1.00	
Retired	-2.00 (-20.84,16.84)		-2.60 (-11.01,5.80)	
Private sector employee	-0.57 (-15.29,14.15)	0.1076	-2.57 (-8.57,3.43)	0.0552
Housewife	9.94 (2.28,17.59)		5.21 (0.22,10.20)	
Student	7.62 (-1.44,16.67)		4.68 (-0.44,9.80)	
Unemployed	8.42 (0.16,16.67)		3.29 (-1.92,8.49)	
Overall health status				
Poor	1.00		1.00	
Fair	7.13 (-8.56,22.81)	0.0011	-2.78 (-11.73,6.17)	0.4182
Good	11.03 (-4.11,26.16)		-5.34 (-13.86,3.19)	
Very good	16.89 (1.84,31.94)		-5.56 (-13.99,2.87)	
Chronic or longstanding illness				
Yes	1.00	0.386	1.00	0.610
No	2.13 (-2.69,6.96)		0.95 (-3.03,4.93)	
Transport to PHC				
Public transport (bus etc)	1.00	0.281	1.00	0.102
Private transport (car, etc)	2.81 (-2.30,7.92)		-4.07 (-8.96,0.81)	
Marital status				
Married	1.00	0.931	1.00	0.934
Not Married	-0.20 (-4.69,4.30)		0.15 (-3.39,3.69)	

Interpersonal care scale	Adjusted for clustering effect using random effect model			
	MoI		MoH	
	Co-efficient (CI 95%	P-value	Co-efficient (CI 95%	P-value
Age groups				
18-24	1.00		1.00	
25-34	1.41 (-4.02,6.84)	0.3758	-1.72 (-6.64,3.21)	0.6219
35-44	4.74 (-1.27,10.75)		1.30 (-3.98,6.59)	
45+	4.21 (-2.49,10.91)		1.15 (-5.04,7.34)	
Sex				
Male	1.00	0.208	1.00	
Female	3.55 (-1.98, 9.10)		7.47 (3.43, 11.50)	
Education				
Primary education or less	1.00		1.00	
Intermediate-Second Edu.	-12.03 (-18.96, -5.10)	0.0023	-6.53 (-13.88,0.81)	0.0001
Some University Edu. Or higher	-11.51 (-18.78, -4.24)		-13.33 (-20.62, -6.04)	
Employment- military				
Private- Sergeant major	1.00			
Lieutenant- Colonel	3.26 (-3.93,10.45)			
Brigadier- Major General	3.99 (-5.79,13.77)	0.5784		
Retired military	-11.12 (-32.28,10.04)			
Military student /Cadet	-2.45 (-11.79,6.89)			
Employment-civilian				
Governmental employee	1.00		1.00	
Retired	8.33 (-29.36,12.69)		-1.54 (-10.99,7.91)	
Private sector employee	-2.38 (-18.81,14.05)	0.1821	-3.62 (-10.37,3.13)	0.0285
Housewife	9.32 (0.78,17.86)		5.46 (-0.15,11.07)	
Student	6.15 (-3.95,16.25)		5.90 (0.14,11.66)	
Unemployed	6.85 (-2.36,16.06)		5.27 (-0.58,11.13)	
Overall health status				
Poor	1.00		1.00	
Fair	2.30 (-14.56,19.17)	0.0118	-1.40 (-11.36,8.56)	0.0565
Good	6.04 (-10.20,22.28)		-6.00 (-15.49,3.49)	
Very good	11.57 (-4.57,27.71)		-7.93 (-17.31,1.46)	
Chronic or longstanding illness				
Yes	1.00	0.321	1.00	0.217
No	-2.65 (-7.90,2.59)		-2.80 (-7.24,1.65)	
Transport to PHC				
Public transport (bus etc)	1.00	0.983	1.00	0.005
Private transport (car, etc)	0.06 (-5.54,5.66)		-7.81 (-13.28, -2.33)	
Marital status				
Married	1.00	0.884	1.00	0.289
Not Married	-0.37 (-5.34,4.60)		2.15 (-1.82,6.13)	

Doctor's knowledge of the patient	Adjusted for clustering effect using random effect model			
	MoI		MoH	
	Co-efficient (CI 95%	P-value	Co-efficient (CI 95%	P-value
Age groups				
18-24	1.00		1.00	
25-34	-0.22 (-5.60,5.15)	0.8692	-0.24 (-5.23,4.74)	0.8271
35-44	1.80 (-4.16,7.76)		1.69 (-3.63,7.01)	
45+	1.62 (-5.00,8.25)		1.77 (-4.46,7.99)	
Sex				
Male	1.00	0.088	1.00	0.306
Female	4.76 (-.705, 10.23)		2.18 (-2.00, 6.37)	
Education				
Primary education or less	1.00		1.00	
Intermediate-Second Edu.	-9.53 (-16.38, -2.69)	0.0078	-3.10 (-10.74,4.54)	0.0025
Some University Edu. Or higher	-11.23 (-18.41, -4.05)		-9.19 (-16.78, -1.60)	
Employment- military				
Private- Sergeant major	1.00			
Lieutenant- Colonel	3.37 (-3.52,10.26)			
Brigadier- Major General	5.49 (-3.87,14.86)	0.3449		
Retired military	-6.69 (-26.96,13.58)			
Military student /Cadet	-5.66 (-14.70,3.38)			
Employment-civilian				
Governmental employee	1.00		1.00	
Retired	0.97 (-21.14,23.07)		-0.42 (-9.74,8.91)	
Private sector employee	-0.14 (-18.23,17.94)	0.6174	-2.69 (-9.40,4.02)	0.3115
Housewife	8.37 (-2.01,18.76)		2.80 (-3.10,8.70)	
Student	5.55 (-6.00,17.11)		4.21 (-1.50,9.92)	
Unemployed	7.30 (-2.83,17.43)		4.29 (-1.57,10.15)	
Overall health status				
Poor	1.00		1.00	
Fair	-6.76 (-23.45,9.92)	0.0184	-6.94 (-16.96,3.08)	0.1394
Good	-3.41 (-19.48,12.67)		-9.77 (-19.31, -0.23)	
Very good	2.23 (-13.74,18.20)		-10.13 (-19.56, -0.70)	
Chronic or longstanding illness				
Yes	1.00	0.213	1.00	0.457
No	-3.34 (-8.60, 1.92)		-1.70 (-6.19, 2.78)	
Transport to PHC				
Public transport (bus etc)	1.00	0.473	1.00	0.003
Private transport (car, etc)	-2.02 (-7.55, 3.50)		-8.29 (-13.80, -2.78)	
Marital status				
Married	1.00	0.654	1.00	0.068
Not Married	1.12 (-3.80, 6.06)		3.71(-.278, 7.71)	

Enablement	Adjusted for clustering effect using random effect model			
	MoI		MoH	
	Co-efficient (CI 95%	P-value	Co-efficient (CI 95%	P-value
Age groups				
18-24	1.00		1.00	
25-34	-0.44 (-7.53,6.65)	0.8471	-6.38 (-12.91,0.15)	0.2505
35-44	-2.43 (-10.26,5.40)		-2.38 (-9.38,4.63)	
45+	-3.28 (-11.98,5.42)		-5.06 (-13.12,3.00)	
Sex				
Male	1.00	0.443	1.00	0.002
Female	2.85 (-4.44, 10.16)		8.15 (2.94, 13.37)	
Education				
Primary education or less	1.00		1.00	
Intermediate-Second Edu.	-8.16 (-17.23,0.90)	0.2044	2.90 (-7.80,13.60)	0.7355
Some University Edu. Or higher	-7.42 (-16.90,2.07)		4.06 (-6.65,14.78)	
Employment- military				
Private- Sergeant major	1.00			
Lieutenant- Colonel	5.76 (-3.83,15.35)			
Brigadier- Major General	7.86 (-5.18,20.89)	0.4633		
Retired military	18.07 (-9.82,45.96)			
Military student /Cadet	1.47 (-10.55,13.49)			
Employment-civilian				
Governmental employee	1.00		1.00	
Retired	20.51 (-10.53,51.56)		-4.67 (-16.93,7.58)	
Private sector employee	-7.76 (-30.37,14.85)	0.4053	-6.36 (-15.27,2.56)	0.3319
Housewife	7.94 (-4.98,20.86)		0.14 (-7.50,7.78)	
Student	3.38 (-10.71,17.47)		-1.66 (-9.34,6.01)	
Unemployed	7.87 (-4.57,20.31)		4.72 (-3.15,12.59)	
Overall health status				
Poor	1.00		1.00	
Fair	14.75 (-7.84,37.34)	0.0001	4.80 (-8.57,18.16)	0.3764
Good	23.75 (1.92,45.57)		4.01 (-8.65,16.67)	
Very good	30.59 (8.91,52.28)		8.17 (-4.39,20.73)	
Chronic or longstanding illness				
Yes	1.00	0.214	1.00	0.649
No	4.22 (-2.44,10.88)		-1.42 (-7.54,4.70)	
Transport to PHC				
Public transport (bus etc)	1.00	0.964	1.00	0.776
Private transport (car, etc)	0.17 (-7.17,7.51)		1.10 (-6.44,8.63)	
Marital status				
Married	1.00	0.410	1.00	0.516
Not Married	-2.68 (-9.04,3.69)		-1.77 (-7.09,3.56)	

Referral	Adjusted for clustering effect using random effect model			
	MoI		MoH	
	Co-efficient (CI 95%	P-value	Co-efficient (CI 95%	P-value
Age groups				
18-24	1.00		1.00	
25-34	2.47 (-8.41,13.35)	0.7134	-11.11 (-25.56,3.35)	0.1800
35-44	-0.86 (-12.96,11.25)		0.37 (-15.22,15.96)	
45+	7.04 (-6.90,20.97)		5.69 (-12.08,23.45)	
Sex				
Male	1.00	0.670	1.00	0.645
Female	2.40 (-8.65, 13.47)		2.77 (-9.02, 14.56)	
Education				
Primary education or less	1.00		1.00	
Intermediate-Second Edu.	-3.47 (-16.77,9.84)	0.7830	5.30 (-17.49,28.09)	0.8940
Some University Edu. Or higher	-0.54 (-14.36,13.28)		5.24 (-17.20,27.68)	
Employment- military				
Private- Sergeant major	1.00			
Lieutenant- Colonel	11.55 (-3.06,26.15)			
Brigadier- Major General	11.10 (-8.46,30.67)	0.0170		
Retired military	20.38 (-21.12,61.89)			
Military student /Cadet	-25.43 (-45.81, -5.06)			
Employment-civilian				
Governmental employee	1.00		1.00	
Retired	26.22 (-12.94,65.39)		-11.47 (-36.65,13.71)	
Private sector employee	29.24 (-18.46,76.95)	0.2742	-8.17 (-27.86,11.52)	0.7133
Housewife	15.72 (-2.65,34.10)		-11.17 (-28.08,5.73)	
Student	5.07 (-16.48,26.63)		-7.66 (-24.49,9.18)	
Unemployed	-0.85 (-19.70,18.01)		-0.11 (-17.86,17.64)	
Overall health status				
Poor	1.00		1.00	
Fair	-4.24 (-32.59,24.12)	0.2243	14.44 (-10.23,39.12)	0.6682
Good	6.18 (-20.62,32.97)		11.15 (-12.39,34.70)	
Very good	9.72 (-17.06,36.50)		8.08 (-15.41,31.57)	
Chronic or longstanding illness				
Yes	1.00	0.901	1.00	0.024
No	.614 (-9.08, 10.31)		-13.94 (-26.06, -1.83)	
Transport to PHC				
Public transport (bus etc)	1.00	0.699	1.00	0.326
Private transport (car, etc)	-2.27 (-13.80,9.26)		-8.66 (-25.91,8.60)	
Marital status				
Married	1.00	0.010	1.00	0.344
Not Married	-13.17 (-23.16, -3.19)		-5.84 (-17.93,6.25)	

Nursing care	Adjusted for clustering effect using random effect model			
	MoI		MoH	
	Co-efficient (CI 95%	P-value	Co-efficient (CI 95%	P-value
Age groups				
18-24	1.00		1.00	
25-34	1.95 (-4.71,8.60)	0.3852	-1.20 (-7.95,5.55)	0.7951
35-44	3.99 (-3.05,11.04)		1.46 (-5.63,8.56)	
45+	7.06 (-1.36,15.49)		-2.36 (-10.79,6.08)	
Sex				
Male	1.00	0.833	1.00	0.103
Female	-.755 (-7.78, 6.27)		4.45 (-.894, 9.80)	
Education				
Primary education or less	1.00		1.00	
Intermediate-Second Edu.	-5.10 (-13.74,3.54)	0.4887	-8.78 (-18.88,1.32)	0.0019
Some University Edu. Or higher	-3.32 (-12.34,5.70)		-15.56 (-25.56, -5.55)	
Employment- military				
Private- Sergeant major	1.00			
Lieutenant- Colonel	0.06 (-8.34,8.46)			
Brigadier- Major General	2.28 (-8.50,13.07)	0.6770		
Retired military	9.67 (-31.92,51.25)			
Military student /Cadet	-7.20 (-17.89,3.48)			
Employment-civilian				
Governmental employee	1.00		1.00	
Retired	16.13 (-13.87,46.13)		-5.40 (-17.23,6.43)	
Private sector employee	-10.54 (-40.54,19.47)	0.1682	-8.22 (-16.71,0.26)	0.0142
Housewife	-6.20 (-17.60,5.19)		2.20 (-5.76,10.17)	
Student	7.03 (-5.86,19.93)		8.48 (1.00,15.97)	
Unemployed	5.98 (-6.31,18.26)		1.82 (-6.22,9.85)	
Overall health status				
Poor	1.00		1.00	
Fair	-2.18 (-20.50,16.14)	0.0034	-3.70 (-16.60,9.21)	0.2337
Good	6.38 (-11.45,24.21)		-4.37 (-16.71,7.96)	
Very good	11.72 (-5.88,29.32)		-8.82 (-20.86,3.21)	
Chronic or longstanding illness				
Yes	1.00	0.946	1.00	0.335
No	-0.21 (-6.35,5.93)		2.83 (-2.92, 8.59)	
Transport to PHC				
Public transport (bus etc)	1.00	0.047	1.00	0.392
Private transport (car, etc)	6.73 (0.09,13.36)		-3.12 (-10.27,4.02)	
Marital status				
Married	1.00	0.456	1.00	0.572
Not Married	2.29 (-3.73,8.32)		1.53 (-3.78,6.85)	

Cultural and religious issues	Adjusted for clustering effect using random effect model			
	MoI		MoH	
	Co-efficient (CI 95%	P-value	Co-efficient (CI 95%	P-value
Age groups				
18-24	1.00		1.00	
25-34	3.02 (-1.60,7.64)	0.3536	-1.79 (-6.07,2.49)	0.2992
35-44	4.33 (-0.78,9.45)		1.91 (-2.67,6.50)	
45+	3.71 (-1.99,9.42)		-2.26 (-7.65,3.14)	
Sex				
Male	1.00	0.018	1.00	0.150
Female	5.69 (.963, 10.42)		2.42 (-.877, 5.73)	
Education				
Primary education or less	1.00		1.00	
Intermediate-Second Edu.	-6.94 (-12.90, -0.98)	0.0742	-3.36 (-9.72,3.00)	0.2981
Some University Edu. Or higher	-5.61 (-11.88,0.67)		-4.80 (-11.12,1.51)	
Employment- military				
Private- Sergeant major	1.00			
Lieutenant- Colonel	0.89 (-5.46,7.25)			
Brigadier- Major General	4.12 (-4.61,12.85)	0.5402		
Retired military	-7.27 (-26.14,11.60)			
Military student /Cadet	-4.45 (-11.98,3.08)			
Employment-civilian				
Governmental employee	1.00		1.00	
Retired	6.17 (-11.72,24.07)		-11.07 (-19.33, -2.81)	
Private sector employee	-2.59 (-17.06,11.89)	0.0186	-3.75 (-9.56,2.06)	0.0009
Housewife	7.96 (0.22,15.69)		-2.77 (-7.62,2.08)	
Student	8.98 (0.24,17.71)		5.71 (0.74,10.68)	
Unemployed	13.27 (5.38,21.16)		-0.02 (-5.11,5.07)	
Overall health status				
Poor	1.00		1.00	
Fair	-2.31 (-16.81,12.19)	0.0021	-1.98 (-10.57,6.60)	0.1443
Good	2.57 (-11.39,16.53)		2.17 (-6.01,10.35)	
Very good	7.59 (-6.26,21.44)		3.31 (-4.76,11.38)	
Chronic or longstanding illness				
Yes	1.00	0.658	1.00	0.124
No	-1.01 (-5.46,3.45)		3.03 (-0.83,6.88)	
Transport to PHC				
Public transport (bus etc)	1.00	0.237	1.00	0.366
Private transport (car, etc)	2.76 (-1.82,7.34)		-2.16 (-6.85,2.53)	
Marital status				
Married	1.00	0.147	1.00	0.124
Not Married	3.07 (-1.08,7.22)		2.71 (-0.75,6.18)	

Psychological issues	Adjusted for clustering effect using random effect model			
	MoI		MoH	
	Co-efficient (CI 95%	P-value	Co-efficient (CI 95%	P-value
Age groups				
18-24	1.00		1.00	
25-34	0.38 (-6.39,7.14)	0.9993	-1.02 (-7.56,5.51)	0.0695
35-44	-0.05 (-7.14,7.05)		7.43 (0.40,14.45)	
45+	-0.01 (-8.09,8.07)		3.84 (-4.25,11.93)	
Sex				
Male	1.00	0.892	1.00	0.001
Female	-.460 (-7.12, 6.20)		9.37 (3.95, 14.79)	
Education				
Primary education or less	1.00		1.00	
Intermediate-Second Edu.	-5.44 (-13.78,2.90)	0.4211	3.86 (-6.51,14.22)	0.466
Some University Edu. Or higher	-5.31 (-14.07,3.45)		-0.74 (-11.08,9.60)	
Employment- military				
Private- Sergeant major	1.00			
Lieutenant- Colonel	2.97 (-6.09,12.03)			
Brigadier- Major General	3.78 (-7.41,14.98)	0.8861		
Retired military	0.71 (-22.59,24.02)			
Military student /Cadet	-2.93 (-13.94,8.07)			
Employment-civilian				
Governmental employee	1.00		1.00	
Retired	-1.88 (-25.02,21.27)		-7.98 (-19.53,3.56)	
Private sector employee	15.63 (-10.72,41.97)	0.5849	-1.10 (-10.02,7.83)	0.3503
Housewife	3.05 (-7.62,13.73)		0.71 (-7.14,8.56)	
Student	10.07 (-2.79,22.93)		4.82 (-3.08,12.73)	
Unemployed	5.96 (-5.13,17.05)		3.96 (-3.71,11.63)	
Overall health status				
Poor	1.00		1.00	
Fair	-4.00 (-22.22,14.22)	0.0018	0.80 (-11.34,12.94)	0.9226
Good	5.92 (-11.45,23.29)		2.85 (-8.67,14.37)	
Very good	11.41 (-6.00,28.82)		2.35 (-9.17,13.87)	
Chronic or longstanding illness				
Yes	1.00	0.355	1.00	0.697
No	2.87 (-3.21,8.94)		-1.18 (-7.13,4.76)	
Transport to PHC				
Public transport (bus etc)	1.00	0.380	1.00	0.803
Private transport (car, etc)	-2.99 (-9.66,3.69)		0.88 (-6.04,7.81)	
Marital status				
Married	1.00	0.347	1.00	0.403
Not Married	2.86 (-3.10,8.82)		2.31 (-3.10,7.71)	

Community participation	Adjusted for clustering effect using random effect model			
	MoI		MoH	
	Co-efficient (CI 95%	P-value	Co-efficient (CI 95%	P-value
Age groups				
18-24	1.00		1.00	
25-34	3.49 (-2.24,9.22)	0.2574	-5.17 (-11.15,0.80)	0.3762
35-44	5.52 (-0.83,11.88)		-1.79 (-8.21,4.62)	
45+	6.10 (-0.98,13.18)		-3.28 (-10.85,4.30)	
Sex				
Male	1.00	0.878	1.00	0.773
Female	-.466 (-6.41, 5.48)		.758 (-4.39, 5.91)	
Education				
Primary education or less	1.00		1.00	
Intermediate-Second Edu.	0.78 (-6.63,8.18)	0.0180	-8.08 (-16.78,0.62)	<0.001
Some University Edu. Or higher	-6.46 (-14.25,1.34)		-18.72 (-27.47, -9.98)	
Employment- military				
Private- Sergeant major	1.00			
Lieutenant- Colonel	-2.81 (-9.59,3.96)			
Brigadier- Major General	0.67 (-8.62,9.95)	0.3707		
Retired military	-9.51 (-29.56,10.54)			
Military student /Cadet	6.24 (-1.87,14.36)			
Employment-civilian				
Governmental employee	1.00		1.00	
Retired	-9.34 (-35.30,16.61)		-5.75 (-17.30,5.80)	
Private sector employee	-14.63 (-35.43,6.18)	0.1029	-11.44 (-19.52, -3.35)	0.0051
Housewife	0.11 (-11.20,11.41)		-1.08 (-8.46,6.30)	
Student	12.14 (-0.64,24.92)		6.06 (-0.95,13.06)	
Unemployed	-2.39 (-13.85,9.06)		-1.91(-9.23,5.42)	
Overall health status				
Poor	1.00		1.00	
Fair	-9.21 (-27.46,9.04)	0.1183	-2.74 (-14.68,9.20)	0.1831
Good	-5.94 (-23.50,11.62)		-0.33 (-11.68,11.02)	
Very good	-1.68 (-19.09,15.74)		-6.02 (-17.23,5.18)	
Chronic or longstanding illness				
Yes	1.00	0.255	1.00	0.658
No	3.21 (-2.32,8.73)		1.23 (-4.20,6.66)	
Transport to PHC				
Public transport (bus etc)	1.00	0.379	1.00	<0.001
Private transport (car, etc)	-2.59 (-8.35,3.18)		-13.12 (-19.70, -6.54)	
Marital status				
Married	1.00	0.007	1.00	0.031
Not Married	7.12 (1.97,12.27)		5.28 (0.48,10.09)	

Organisational issues	Adjusted for clustering effect using random effect model			
	MoI		MoH	
	Co-efficient (CI 95%	P-value	Co-efficient (CI 95%	P-value
Age groups				
18-24	1.00		1.00	
25-34	2.14 (-3.19,7.48)	0.7963	-4.25 (-9.54,1.03)	0.1261
35-44	2.63 (-3.28,8.55)		0.84 (-4.82,6.51)	
45+	2.55 (-4.04,9.14)		-4.91 (-11.54,1.71)	
Sex				
Male	1.00	0.132	1.00	0.124
Female	4.21 (-1.27, 9.70)		3.42 (-.937, 7.78)	
Education				
Primary education or less	1.00		1.00	
Intermediate-Second Edu.	-3.70 (-10.62,3.21)	0.2791	-8.08 (-15.79, -0.37)	0.0005
Some University Edu. Or higher	-5.85 (-13.12,1.43)		-13.80 (-21.52, -6.08)	
Employment- military				
Private- Sergeant major	1.00			
Lieutenant- Colonel	2.61 (-4.34,9.56)			
Brigadier- Major General	2.74 (-6.77,12.26)	0.5995		
Retired military	-14.09 (-34.65,6.47)			
Military student /Cadet	-0.68 (-8.98,7.63)			
Employment-civilian				
Governmental employee	1.00		1.00	
Retired	2.78 (-18.34,23.89)		-5.34 (-15.47,4.80)	
Private sector employee	-7.57 (-24.52,9.39)	0.0289	-4.19 (-11.30,2.93)	0.0019
Housewife	6.55 (-2.77,15.87)		1.35 (-4.84,7.54)	
Student	15.93 (5.45,26.41)		10.32 (4.16,16.48)	
Unemployed	3.52 (-5.77,12.82)		1.52 (-4.81,7.85)	
Overall health status				
Poor	1.00		1.00	
Fair	6.73 (-9.95,23.41)	0.0008	-4.85 (-15.40,5.71)	0.7682
Good	13.25 (-2.80,29.30)		-2.38 (-12.42,7.66)	
Very good	18.20 (2.28,34.12)		-2.55 (-12.49,7.38)	
Chronic or longstanding illness				
Yes	1.00	0.162	1.00	0.600
No	3.65 (-1.46, 8.77)		1.28 (-3.51, 6.07)	
Transport to PHC				
Public transport (bus etc)	1.00	0.989	1.00	0.001
Private transport (car, etc)	-.038 (-5.40, 5.33)		-9.96 (-15.81, -4.10)	
Marital status				
Married	1.00	0.009	1.00	0.116
Not Married	6.31 (1.54, 11.07)		3.45 (-.858, 7.76)	

APPENDIX (K)

RELATIONSHIP BETWEEN PATIENT CHARACTERISTICS AND EACH SATISFACTION SUBSCALE AS A DEPENDENT VARIABLE

(FOR EACH PHC CENTRE)

Quality subscales	Access	Receptionists	Continuity	Communication	Interpersonal care	Doctor's knowledge of patient	Enablement	Referral to specialists	Nursing care	Cultural and religious	Organisational issues	Psychological issues	Community participatio	Overall satisfaction
PHC centres														
Border HQ	60.28	65.14	57.57	64.04	57.25	51.32	57.14	69.44	62.88	67.79	51.19	60.21	34.57	52.61
Border Inst	61.59	68.95	57.09	65.97	59.89	60.81	58.81	60	59.05	70.01	65.82	64.6	56.36	66.91
Special Forces	71.06	64.85	72.17	72.58	67.34	65.31	72.69	93.87	60.66	71.66	57.28	66.6	49.71	64.28
King Fahad Academy	89.33	89.27	88.18	75.29	86.66	86.17	55.88	98.38	85.57	87.31	87.68	89.36	86.95	91.54
Training City	78.90	82.19	74.72	73.61	70.09	64.81	80.0	76.59	66.09	80.59	68.33	70.0	48.94	79.68
Security Forces Hos	54.84	56.21	51.69	63.40	59.01	55.93	60.05	86.04	50.54	61.19	60.75	56.42	47.82	59.33
Al Mursalat	62.78	71.26	61.42	66.59	60.80	58.13	65.21	78.37	68.25	72.38	56.26	62.35	48.57	59.62
Salah al-diean	65.71	75.94	65.86	64.84	63.07	58.59	67.33	70.96	61.73	71.07	62.38	67.05	48.24	59.07
Al-aulia	63.82	71.50	65.20	63.76	59.45	56.71	55.79	95.0	64.66	73.69	62.28	61.02	49.40	58.67
king fahad's	67.09	72.22	65.42	67.92	63.14	57.05	62.93	57.14	60.68	72.17	55.11	66.25	45.83	54.62
Al-rabuah	67.44	64.32	61.71	65.58	58.73	52.42	60.22	61.76	66.55	72.32	51.32	55.20	41.52	63.47
Al-muhamadia	64.53	66.30	60.0	63.12	58.70	54.16	53.86	90.32	57.61	68.63	61.11	63.01	42.96	59.58
Age group														
18-24	67.73	68.53	65.38	67.12	63.36	60.16	65.50	82.22	63.41	71.47	61.23	64.91	49.68	64.52
25-34	66.16	70.03	65.89	66.56	62.04	58.76	61.59	76.28	63.37	71.68	60.25	64.05	47.90	60.99
35-44	67.24	73.80	64.70	68.56	65.13	60.98	62.34	80.0	65.21	74.16	63.92	67.94	51.79	65.80
45-54	70.40	70.11	64.09	66.89	65.27	61.31	61.70	84.0	66.13	71.92	60.49	66.71	51.17	66.47
<55	65.10	71.90	64.0	65.91	65.66	61.16	57.01	94.73	67.22	73.19	62.26	67.0	53.33	67.46
Sex														
Male	65.31	70.76	63.73	64.73	62.04	59.54	59.86	80.19	64.10	71.08	61.56	64.89	50.86	61.34
Female	70.89	70.36	68.04	71.76	66.64	61.07	67.59	80.83	64.79	74.72	61.58	67.32	48.25	69.0
Employment- military														
Private-Corporal	69.89	74.92	67.24	67.27	68.22	66.88	49.85	83.33	71.01	74.47	67.22	69.77	60.31	70.37
Sergeant- Master Sergeants	68.56	68.57	66.22	66.56	63.12	58.48	63.50	75.0	64.0	68.61	62.76	65.17	53.43	65.36
Sergeant Major	72.92	83.07	73.84	69.23	69.23	68.71	52.56	88.88	67.61	76.62	70.38	69.0	64.10	66.66
Lieutenant -Major	60.49	60.0	61.14	62.80	61.90	58.09	61.51	81.81	60.0	66.23	56.08	59.16	41.26	56.30
Lieutenant Colonel-Colonel	73.85	78.66	76.0	75.0	72.0	68.44	60.71	91.66	72.30	81.5	68.66	84.54	57.33	64.44
Brigadier General	79.19	81.42	85.71	75.71	79.04	77.14	66.07	100	78.78	81.07	73.92	78.46	67.14	80.95
Major General	89.89	87.5	90.0	74.37	85.0	87.5	56.25	100	86.66	89.68	88.75	88.57	85.0	87.5
Retired Military	52.94	55.0	55.0	60.0	48.33	60.00	70.83	100	80	61.25	55.0	65.0	43.33	45.83
Military Cadet	61.28	66.90	54.04	62.74	60.83	59.71	58.77	52.38	58.55	69.08	66.63	64.47	60.90	68.18
Employment-civilian														
Governmental employee	63.30	71.77	60.78	64.16	59.22	55.37	62.41	84	62.25	71.01	57.31	62.58	46.85	58.54
Retired														
Private sector employee	62.27	67.5	60.0	61.25	56.11	54.72	61.59	73.33	59.21	63.64	52.63	55.71	39.72	51.38
Housewife	59.47	69.64	63.33	61.29	55.12	52.83	56.41	79.16	53.60	68.52	53.39	62.5	34.99	48.21
Student														
Unemployed	71.44	68.78	67.40	71.44	66.64	61.01	67.16	80.51	60.63	71.76	59.79	63.61	47.10	69.72
	71.81	72.74	68.04	69.35	65.37	60.74	63.54	78.43	70.20	77.92	68.95	69.67	55.18	68.30
	67.34	69.33	66.79	69.37	65.38	61.34	69.21	80.70	65.72	74.51	59.04	67.53	45.57	63.01
Education														
Illiterate	74.41	77.89	70.58	69.90	71.48	71.85	74.01	80.0	56.96	72.23	66.22	67.33	51.92	71.92
Primary education	77.52	77.96	73.92	75.58	77.07	68.96	67.48	81.57	74.25	79.61	68.92	70.48	57.06	76.83
Intermediate education	72.89	72.90	66.16	70.41	68.45	64.75	63.83	85.93	68.25	74.21	67.19	69.17	59.78	69.21
Secondary education	66.83	70.19	64.10	66.83	62.98	60.51	61.59	78.14	63.36	70.94	62.08	65.56	52.32	66.39
Below university education	61.80	65.10	60.63	62.21	57.62	53.12	63.24	76.66	61.56	69.18	57.12	59.86	45.10	58.33
Bachelor from military	72.56	73.46	74.89	71.06	70.07	69.50	61.48	90.62	74.35	76.93	70.10	77.42	57.41	68.02
University degree	62.62	69.77	64.21	65.79	59.26	54.98	61.25	78.26	59.68	71.40	55.53	63.22	38.83	55.11
Postgraduate degree	61.57	66.45	66.0	64.19	63.65	56.98	61.82	88.23	61.0	72.74	54.35	61.2	45.05	54.30
Other	78.70	85.0	60.0	58.33	51.11	46.66	66.66	50.0	71.66	83.75	71.25	50.0	51.66	70.83

Nationality														
Saudi	66.73	70.17	64.89	66.84	63.17	59.49	62.09	79.86	63.99	72.05	61.02	65.21	49.62	63.37
Non-Saudi	75.45	78.77	70.21	73.29	71.77	69.375	71.00	89.28	68.68	77.09	70.13	72.04	54.96	74.14
Marital status														
Married	66.99	70.41	65.32	67.32	63.56	59.20	63.66	83.54	63.75	71.51	59.50	64.77	47.29	62.71
Single	67.53	70.97	64.53	66.99	63.81	61.54	61.24	75.96	65.44	73.91	65.51	67.61	54.86	66.02
Divorced	66.77	72.94	67.05	67.05	61.56	60	57.29	66.66	62.22	72.05	59.11	63.84	54.11	68.62
Widowed	71.45	77.5	75	66.87	69.16	69.16	56.25	42.85	61.11	72.81	61.87	63.75	42.49	64.58
Accommodation														
Owner-occupied	65.27	69.97	63.53	66.35	61.49	58.33	61.14	76.19	64.53	72.03	60.00	64.40	47.79	61.08
Rented from work	68.60	71.13	67.40	67.96	64.76	60.25	64.09	82.05	64.57	72.60	61.72	65.76	49.90	65.80
Rented from private landlord	74.45	73.11	70.65	71.70	72.60	69.15	70.88	93.93	65.81	74.70	69.36	74.15	60.07	73.93
Other arrangements	58.66	69.65	50	57.14	55.47	53.69	44.44	66.66	50.52	65.19	55.97	52.17	47.61	56.89
Transport to PHC														
Walking	66.82	70.23	62.16	67.87	65.47	63.69	60.88	83.33	58.38	71.61	62.17	67.5	55.96	64.34
Public transport (bus etc)	68.11	71.38	62.06	68.05	66.10	63.77	65.40	86.20	64.58	71.62	67.92	63.75	54.56	69.48
Private transport (car, etc)	66.71	70.48	65.35	67.23	62.89	58.74	62.48	78.96	64.70	72.66	60.37	65.37	47.87	62.91
Sector														
MoI	67.44	71.17	68.17	67.75	65.18	63.35	61.91	85.65	65.17	73.29	63.05	69.63	53.05	64.22
MoH	67.02	70.15	62.25	66.67	62.18	56.90	63.32	74.77	63.25	71.41	60.09	62	46.89	63.75
Health														
Very Poor	64.48	67.40	56.15	65.44	62.30	62.69	50	66.66	63.33	67.76	55.92	58.75	48.76	55.55
Poor	62.12	66.40	58.70	65.30	62.38	57.27	57.21	77.21	59.40	66.18	55.46	58.48	46.45	57.10
Fair	64.94	69.71	63.74	65.68	61.69	57.31	61.42	79.74	63.53	71.24	59.40	63.99	48.54	63.70
Good	70.62	73.09	68.88	69.10	65.61	62.62	66.08	83.98	66.49	75.34	65.00	70.54	51.88	66.74
Chronic														
Yes	69.92	72.65	67.03	66.63	67.87	64.51	60.19	86.27	65.70	72.65	62.78	67.66	52.87	65.61
No	66.26	69.90	64.47	67.33	62.11	58.50	63.29	77.17	63.69	72.11	61.01	64.92	48.91	63.35

APPENDIX (L)
GPAS QUESTIONNAIRE
(ENGLISH VERSION)

Dear Patient,
Between your hands is a study survey that was carefully designed to collect and understand your views on the quality of Ministry of the Interior and Ministry of Health Primary Health Care Centres.
This survey is part of the empirical work undertaken by the researcher to complete his PhD degree at a United Kingdom University.
I would like you to kindly pay careful attention to answering questions included in this questionnaire because doing so will enable the researcher to collect needed information to build a database of information to enhance and improve the quality of services provided to patients in the future.

The researcher wishes to thank you in advance for your time and co-operation and at the same time to assure you that all collected information, including your personal details, will be treated with the utmost confidentiality and will only be used for scientific research purposes. Managers, doctors and other primary health care centre team members will not be allowed to access your responses, including your personal names and details.

Ultimately, participation in this study is voluntary and not compulsory and anyone can accept or reject being involved in it.

As a gesture of good will, and because the researcher recognises the valuable time and information you contribute to this study he wishes to offer you the opportunity to be included in the draw to win a prize at the end of survey data collection. If you wish to be included in this draw, please write your contact details in the designated box (please do not write your name) so you can be contacted if you win the prize.

Finally, I would like to thank you again and wish you every success and happiness.

Yours Sincerely
Captain Ibraheem M M Al-Hosan
PhD Candidate, Bristol University, United Kingdom

University of BRISTOL

www.gpas.co.uk

GPAS General Practice Assessment Survey

The Questionnaire[a]

A Questionnaire to elicit and study patients' views of services provided by Ministry of the Interior Primary Care Centres and Ministry of Health Primary Care Centres

❑ ❑ **Primary healthcare Identification Number**

❑ ❑ ❑ **Patient Identification Number**

1. How **long** have you been a patient with this primary healthcare centre? please specify (5 years for instance).....

[a] This is a modified copy of the GPAS-2 questionnaire, the authorised modification is for the purpose of academic study undertaken by the PhD researcher, Mr Ibraheem Al-Hosan .**The General Practice Assessment Survey (GPAS-2)** is the copyright of the National Primary Care Research and Development Centre, University of Manchester and Safran/The Health Institute. Version 2. January 2001

University of BRISTOL

2. In the past 12 months, **how many times** have you seen a doctor from your primary healthcare centre?

❑ 1 **None** ❑ 2 **Once or twice** ❑ 3 **Three or four times** ❑ 4 **Five or six times** ❑ 5 **Seven times or more**

3. How do you rate the convenience of your PHC centre's **location**?

❑ 1 **Very poor** ❑ 2 **Poor** ❑ 3 **Fair** ❑ 4 **Good** ❑ 5 **Very good** ❑ 6 **Excellent**

4. How do you rate the way you are treated by **receptionists** at your PHC centre?

❑ 1 **Very poor** ❑ 2 **Poor** ❑ 3 **Fair** ❑ 4 **Good** ❑ 5 **Very good** ❑ 6 **Excellent**

5. a) How do you rate the **hours** that your PHC centre is open for appointments?

❑ 1 **Very poor** ❑ 2 **Poor** ❑ 3 **Fair** ❑ 4 **Good** ❑ 5 **Very good** ❑ 6 **Excellent**

b) What **additional** hours would you like the practice to be open? (please tick all that apply)

❑ 1 **Early morning** (b) ❑ 1 **Lunch-times** (c) ❑ 1 **Evenings** (d) ❑ 1 **Week-ends** (e) ❑ 1 **None, I am satisfied** (f)

6. Thinking of times when you want to see a **particular** doctor: (please tick only one box)

a) How quickly do you usually get to see that doctor?

❑ 1 **Same day** ❑ 2 **Next day** ❑ 3 **2 - 3 days days** ❑ 4 **4 - 5 days** ❑ 5 **More than 5** ❑ 6 **Does not apply**

b) How do you rate this?

❑ 1 **Very poor** ❑ 2 **Poor** ❑ 3 **Fair** ❑ 4 **Good** ❑ 5 **Very good** ❑ 6 **Excell-ent** ❑ 7 **Does not apply**

7. Thinking of times when you are willing to see **any** doctor: (please tick only one box)

a) How quickly do you usually get seen?

❑ 1 **Same day** ❑ 2 **Next day** ❑ 3 **2 - 3 days** ❑ 4 **4 - 5 days** ❑ 5 **More than 5 days** ❑ 6 **Does not apply**

b) How do you rate this?

❑ 1 **Very poor** ❑ 2 **Poor** ❑ 3 **Fair** ❑ 4 **Good** ❑ 5 **Very good** ❑ 6 **Excell-ent** ❑ 7 **Does not apply**

8. If you need to see a GP **urgently**, can you normally get seen on the same day?

Yes ❑ 1 **No** ❑ 2 **Don't know / never needed to** ❑ 3

9. a) How long do you usually have to **wait** at the practice until your consultation begins? (please tick only one box)

University of BRISTOL

- ❑ 1 **Not at all, it begins on time**
- ❑ 2 **Less than 5 minutes**
- ❑ 3 **6 to 10 minutes**
- ❑ 4 **11 to 20 minutes**
- ❑ 5 **21 to 30 minutes**
- ❑ 6 **31 to 45 minutes**
- ❑ 7 **More than 45 minutes**

b) How do you rate this? ❑ 1 **Very poor** ❑ 2 **Poor** ❑ 3 **Fair** ❑ 4 **Good** ❑ 5 **Very good** ❑ 6 **Excellent**

10. Thinking about times you have **phoned** the practice, how do you rate the following:

	Very poor	**Poor**	**Fair**	**Good**	**Very good**	**Excell-ent**	**Don't know / never tried**
a) Ability to **get through to** the practice on the phone?	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 6	❑ 7
b) Ability to **speak to** a doctor on the phone when you have a question or need medical advice?	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 6	❑ 7

11-The next questions ask about your <u>usual doctor</u>. If you don't have a 'usual doctor', answer for the one doctor at your practice whom you know best. If you don't know any of the doctors, go straight to question 19.

12. a) In general, how often do you see your **usual doctor**? ❑ 1 **Always** ❑ 2 **Almost always** ❑ 3 **A lot of the time** ❑ 4 **Some of the time** ❑ 5 **Almost never** ❑ 6 **Never**

b) How do you rate this? ❑ 1 **Very poor** ❑ 2 **Poor** ❑ 3 **Fair** ❑ 4 **Good** ❑ 5 **Very good** ❑ 6 **Excellent**

13. Thinking about **talking** with your usual doctor, how do you rate the following:

	Very poor	**Poor**	**Fair**	**Good**	**Very good**	**Excellent**
a) How **thoroughly** does your doctor ask about your symptoms and how you are feeling?	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 6
b) How well does your doctor **listen** to what you say?	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 6
c) How well does your doctor **explain** your health problems or any treatment that you need?	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 6

14. How often do you leave your doctor's surgery with **unanswered questions**? ❑ 1 **Always** ❑ 2 **Almost always** ❑ 3 **A lot of the time** ❑ 4 **Some of the time** ❑ 5 **Almost never** ❑ 6 **Never**

University of BRISTOL

15. Thinking about the **personal aspects** of care that you receive from your usual doctor, how do you rate the following:

	Very poor	Poor	Fair	Good	Very good	Excellent
a) The amount of **time** your doctor spends with you?	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 6
b) The doctor's **patience** with your questions or worries?	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 6
c) The doctor's **caring and concern** for you?	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 6

Newly added domains/ Emotional domain

16-Thinking about your psychological welfare, how do you rate the following:

a) How well your doctor understands your psychological needs

Very Poor	Poor	Fair	Good	Very good	Excellent	Does not apply
❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 6	❑ 7

b) How much your doctor helps you deal with your emotional problems?

Very Poor	Poor	Fair	Good	Very good	Excellent	Does not apply to me
❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 6	❑ 7

17. Thinking about how well your doctor **knows you,** how do you rate the following:

	Very poor	Poor	Fair	Good	Very good	Excellent
a) Your doctor's knowledge of your **medical history**?	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 6
b) Your doctor's knowledge of what **worries** you most about your health?	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 6
c) Your doctor's knowledge of your **responsibilities** at home, work or school?	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 6

18a. In the past 12 months, has there been a time when you thought you needed to see a **specialist?** **Yes** ❑ 1 – go to question 17b **No** ❑ 2 – go to question 18

18b. If YES, did your doctor send you to see a **specialist?** **Yes** ❑ 1 **No** ❑ 2

19 After a visit to your usual doctor would you say that you <u>generally</u> feel:

	Much more than before the visit	A little more than before the visit	The same or less than before the visit	Does not apply to me
(a) able to **understand** your problem(s)				

University of BRISTOL

or illness?	❑ 1	❑ 2	❑ 3	❑ 4
(b) able to **cope** with your problem(s) or illness	❑ 1	❑ 2	❑ 3	❑ 4
(c) able to **keep yourself** healthy?	❑ 1	❑ 2	❑ 3	❑ 4

20. Have you seen a **nurse** from your practice in the past 12 months? **Yes** ❑ 1 – go to question 20 **No** ❑ 2 – go to question 22

21. If YES, **how many times** have you seen a nurse from your practice in the past 12 months? please specify (5 times for instance).....

22. Thinking about the **nurses you have seen,** how do you rate the following:

	Very poor	**Poor**	**Fair**	**Good**	**Very good**	**Excellent**
a) How well they **listen** to what you say?	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 6
b) The **quality** of care they provide?	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 6
c) How well they **explain** your health problems or any treatment that you need?	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 6

Newly added domains/Cultural, religious and gender domains

23-Thinking about cultural, religious and gender issues, how do you rate the following:

a) Your doctor speaks to you with respect?

Very Poor	**Poor**	**Fair**	**Good**	**Very good**	**Excellent**
❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 6

b) Your doctor speaks to you in a language you can understand?

Very Poor	**Poor**	**Fair**	**Good**	**Very good**	**Excellent**
❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 6

c) The nurses speak to you with respect?

Very Poor	**Poor**	**Fair**	**Good**	**Very good**	**Excellent**
❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 6

d) The nurses speak to you in a language you can understand?

Very Poor	**Poor**	**Fair**	**Good**	**Very good**	**Excellent**
❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 6

e) The receptionists speak to you with respect?

Very	**Poor**	**Fair**	**Good**	**Very**	**Excellent**

University of BRISTOL

Poor ❑1 ❑2 ❑3 ❑4 ❑5 good ❑6

f) The receptionists speak to you in a language you can understand

Very Poor ❑1 | Poor ❑2 | Fair ❑3 | Good ❑4 | Very good ❑5 | Excellent ❑6

g) Your doctor shows concern for your religious obligations?

Very Poor ❑1 | Poor ❑2 | Fair ❑3 | Good ❑4 | Very good ❑5 | Excellent ❑6

h) Your wishes are respected about seeing a doctor of the same gender as yourself?

Very Poor ❑1 | Poor ❑2 | Fair ❑3 | Good ❑4 | Very good ❑5 | Excellent ❑6

Newly added domain/Range of services and organisation issues

24- Thinking about the range of services and the organisation, , how do you rate the following:

a) Provision of prescribed medication?

Very Poor ❑1 | Poor ❑2 | Fair ❑3 | Good ❑4 | Very good ❑5 | Excellent ❑

b) The availability of specialists at the health care centre?

Very Poor ❑1 | Poor ❑2 | Fair ❑3 | Good ❑4 | Very good ❑5 | Excellent ❑

c) Organisation and comfort of the waiting area?

Very Poor ❑1 | Poor ❑2 | Fair ❑3 | Good ❑4 | Very good ❑5 | Excellent ❑

d) Cleanliness of the primary health care building?

Very Poor ❑1 | Poor ❑2 | Fair ❑3 | Good ❑4 | Very good ❑5 | Excellent ❑

Newly added domain/ Community participation issues

25- Thinking about community participation, how do you rate:

a) The involvement of this health care centre in the local community?

Very Poor ❑1 | Poor ❑2 | Fair ❑3 | Good ❑4 | Very good ❑5 | Excellent ❑

b) the extent to which the health centre informs the local community about its activities?

Very Poor	Poor	Fair	Good	Very good	Excellent
❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑

c) the role of the health centre in promoting the health of the local population?

Very Poor	Poor	Fair	Good	Very good	Excellent
❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑

26. All things considered, how **satisfied** are you with your practice? (Please tick one box only)

- ❑ 1 **Completely dissatisfied, couldn't be worse**
- ❑ 2 **Very dissatisfied**
- ❑ 3 **Fairly dissatisfied**
- ❑ 4 **Neither satisfied nor dissatisfied**
- ❑ 5 **Fairly satisfied**
- ❑ 6 **Very satisfied**
- ❑ 7 **Completely satisfied, couldn't be better**

27- Thinking about the aspects of healthcare services quality provided by your primary healthcare centre, please tick the level of importance for each one listed below.

Quality of services domains	Not important at all (1)	Not important (2)	I do not know (3)	Important (4)	Very important (5)
1- Access to services					
2- Maintaining a good relationship with the doctor (interpersonal care)					
3- Doctor's knowledge of the patient					
4- Referral to specialists					
5- Nursing care and attitude					
6- Receptionists' attitude and performance					
7- Doctor's assistance to overcome your illness and cope with it (enablement)					
8- Community participation in primary care activities					
9- Your doctor's understanding of psychological issues					
10- Religious and cultural issues					
11- Continuity of care (long-term relationship with your doctor)					
12- Decision-making and the exchange of information about treatment (communication with your doctor)					
13- Overall satisfaction					
14-Availability of heath care specialists and how services are organised (the range of services and organisation)					

Finally, it will help us to understand your answers if you could tell us a little about yourself:

28. Over the last 12 months, would you say your **health** has on the whole been:

❑ 1	❑ 2	❑ 3	❑ 4	❑ 5
Very good	**Good**	**Fair**	**Bad**	**Very bad**

29. Do you have any **long-term illness, health problem or disability** which limits your daily activities or the work you can do? (include problems which are due to old age)

University of BRISTOL

Yes ❑ 1 **No** ❑ 2

30. Are you: **Male** ❑ 1 **Female** ❑ 2

31. How old are you? _____ years

32. Which **nationality** do you belong to? (please tick only one box)

Saudi Arabian ❑ 1 **Non-Saudi** ❑ 2

33. Is your **accommodation:** (please tick only one box)

❑ 1 **Owner-occupied**

❑ 2 **Rented from work**

❑ 3 **Rented from a private landlord**

❑ 4 **Other arrangements**

33. When you **visit** your practice, how do you normally get there? (please tick only one box)

❑ 1 **Walking**

❑ 2 **Public transport (e.g. taxi, etc.)**

❑ 3 **Private transport, e.g. car**

34. Which of the following best describes you? (Please tick one box only)

❑ **Employed Military**

❑1 Private- Corporal ❑2 Sergeant- Master Sergeant ❑3 Sergeant Major

❑4 Lieutenant- Major ❑5 Lieutenant Colonel- Colonel ❑6 Brigadier General

❑7 Major General ❑8 Lieutenant General ❑9 General

❑ 10 **Retired Military (Please write rank.....)**

❑ 11 **Military Cadet**

❑ **Employed-civilian**

❑1 Governmental employee (please indicate grade: .....

❑2 Retired

❑3 Private Sector employee (Trader, Businessman or Businesswomen, etc.)

❑4 Housewife

❑5 Student (please indicate which educational level.....)

❑6 None of the above, please indicate.....)

❑7 Unemployed

University of BRISTOL

35. What is your **educational** status? (please tick all boxes that apply)

- ❑ **Illiterate**
- ❑ **Primary Education or less**
- ❑ **Intermediate education or less**
- ❑ **Secondary education or less**
- ❑ **Vocational training**
- ❑ **Military Education**
- ❑ **University education or less**
- ❑ **Higher education (Master, Doctorate, etc)**
- ❑ **Other, please specify .....**

36. **Marital status (all categories)**

- ❑ Married
- ❑ Single
- ❑ Divorced
- ❑ Widowed

Thank you very much for taking the time to complete this questionnaire.

APPENDIX (M)

GPAS QUESTIONNAIRE

(ARABIC VERSION)

UNIVERSITY OF BRISTOL

Department of Social Medicine

Canynge Hall, Whiteladies Road, Bristol, BS8 2PR

Tel +44 (0)117 928 7279
Fax +44 (0)117 928 7325
Email info-socmed@bristol.ac.uk

بسم الله الرحمن الرحيم

1424/07/15هـ

أخي المراجع / أختي المراجعة

السلام عليكم ورحمة الله وبركاته/

أضع بين أيديكم نموذج إستبانة تم إعداده بدقة لكي نستطيع من خلاله محاولة التعرف على وجهة نظر المراجعين والمرضى لمراكز الرعاية الصحية الأولية بوزارة الداخلية وكذلك مراجعي ومرضى مراكز الرعاية الصحية الأولية بوزارة الصحة.

وحيث أن هذا الإستبيان هو خاص لإكمال متطلبات دراستي لدرجة الدكتوراه في جامعة بريستول ببريطانيا، لذا آمل منكم التكرم و تعبئة النموذج بكل دقة لكي نصل بإذن الله إلى نتائج عملية نستطيع من خلالها رصد وجهة نظر المريض والمراجع لهذه المستوصفات وبالتالي يستطيع الباحث تكوين قاعدة بيانات مدروسة علمياً تساهم بشكل فعال في تطوير جودة الخدمات المقدمة للمرضى والمراجعين.

والباحث إذ يشكركم مقدماً على مساهمتكم في هذا البحث العلمي، فإنه يؤكد لكم على أن **جميع بياناتكم الشخصية والمعلومات التي سوف تدلون بها سوف تعامل بسرية تامة** وسوف تستخدم لأغراض البحث العلمي فقط. هذا بالإضافة إلى أن المسؤولين والأطباء في هذه المراكز الصحية لن يطلعوا على هويتك أو المعلومات التي سوف تدلي بها. وفي الختام فإن الباحث يؤكد للجميع بأن **المشاركة في هذه الدراسة إختيارية وليست إجبارية** وللجميع حق الرفض أو القبول في المشاركة.

وكعرفان من الباحث على أهمية وفائدة مشاركتكم فإن **الباحث قد خصص مبلغاً مالياً وجوائز عينية أخرى مثل أجهزة هاتف جوال** وغيرها وسوف يتم السحب عليها في **نهاية جمع نماذج الإستبيان،** فعلى الراغبين في المشاركة والدخول في عملية السحب التكرم بكتابة رقم هاتف جوال أو وسيلة اتصال أخرى (**الرجاء عدم كتابة الاسم**) لكي نتمكن من الاتصال بكم في حاله الفوز بأحد هذه الجوائز.

هذا وأشكر الجميع مرة أخرى سائلاً المولى عز وجل أن يجعل التوفيق والنجاح حليف الجميع ،،

أخوكم الباحث نقيب / إبراهيم بن محمد الحصان
طالب دكتواره/ جامعة بريستول بريطانيا

www.gpas.co.uk

GPAS General Practice Assessment Survey

نموذج إستبيان[1]

لدراسة وتقييم وجهة نظر المرضى والمراجعين لمستوصفات الرعاية الصحية الأولية بوزارة الداخلية ومراكز الرعاية الصحية الأولية التابعة لوزارة الصحة بالمملكة العربية السعودية

رقم المستوصف ☐☐

رقم المريض ☐☐☐

***الرجاء كتابة رقم الهاتف للدخول في السحب على الجوال

بسم الله الرحمن الرحيم

1- كم لكم من سنة وانتم تراجعون هذا المستوصف؟ الرجاء حدد (5 سنوات مثلاً) .....

2- في الأشهر الإثني عشر الماضية ، كم مرة راجعت الطبيب في هذا المستوصف؟

☐5 ☐4 ☐3 ☐2 ☐1

[1] نسخة مطورة للأستخدام في المملكة العربية السعودية كجزء تكميلي للدراسة الأكاديمية
من قبل الباحث / إبراهيم بن محمد الحصان
The General Practice Assessment Survey (GPAS-2)
GPAS is the copyright of the National Primary Care Research and Development Centre, University of Manchester and Safran/The Health Institute. Version 2. January 2001

ولا مرة | مرة واحدة أو مرتين | ثلاث أو أربع مرات | خمسة أو ستة مرات | سبع مرات أو أكثر

3- كيف تقيم موقع المستوصف من حيث المكان ؟

❑1 سيء جداً | ❑2 سيء | ❑3 لابأس | ❑4 جيد | ❑5 جيد جداً | ❑6 ممتاز

4- كيف تقيم الطريقة التي يعاملكم بها موظفي الاستقبال بالمستوصف ؟

❑1 سيء جداً | ❑2 سيء | ❑3 لابأس | ❑4 جيد | ❑5 جيد جداً | ❑6 ممتاز

5 أ- كيف تقيم ساعات عمل المستوصف ؟

❑1 سيء جداً | ❑2 سيء | ❑3 لابأس | ❑4 جيد | ❑5 جيد جداً | ❑6 ممتاز

ب- ماهي ساعات العمل الإضافية التي ترغب أن يتم إضافتها لساعات عمل المستوصف؟

❑1 الصباح الباكر | ❑2 وقت الظهر | ❑3 في المساء | ❑4 إجازة نهاية الأسبوع | ❑5 لاشيء أنا راضي حالياً

6- في المرات التي ترغب فيها زيارة عيادة طبيب معين ولك به سابق معرفة(سبق لك زيارة عيادته من قبل) الرجاء وضع علامة صح على الاجابة المناسبة)

أ- ماهي سرعة الوقت التي تحتاجها للوصول لهذا الطبيب ؟

❑1 في نفس اليوم | ❑2 اليوم التالي | ❑3 2-3 أيام | ❑4 4-5 أيام | ❑5 أكثر من خمسة أيام | ❑6 لاينطبق هذا علي

ب- كيف تقيم هذا الوضع ؟

❑1 سيء جداً | ❑2 سيء | ❑3 لابأس | ❑4 جيد | ❑5 جيد جداً | ❑6 ممتاز

7- في المرات التي ترغب فيها بزيارة أي طبيب بالمستوصف، هل تمت مقابلة الطبيب في : (الرجاء وضع صح على الاجابة المناسبة)

أ- ماهوالوقت التي تحتاجها للوصول لهذا الطبيب ؟

❑1 في نفس اليوم | ❑2 اليوم التالي | ❑3 2-3 أيام | ❑4 4-5 أيام | ❑5 أكثر من خمسة أيام | ❑6 لاينطبق هذا علي

ب- كيف تقيم هذا الوضع ؟

❑1 سيء جداً | ❑2 سيء | ❑3 لابأس | ❑4 جيد | ❑5 جيد جداً | ❑6 ممتاز

8- إذا كنت ترغب بالدخول على الطبيب في الحالات الطارئة ، هل تستطيع الدخول عليه في نفس اليوم؟

❑1 نعم ❑2 لا ❑3 لاأدري لم أحتاج ذلك

9 أ- كم من الوقت تحتاج عادة للانتظار قبل الدخول على الطبيب ؟

❑1 لايوجد انتظار إطلاقاً ، الدخول عادة على الموعد
❑2 أقل من خمسة دقائق
❑3 من 6 إلى 10 دقائق
❑4 من 11 إلى 20 دقيقة
❑5 من 21- 30 دقيقة
❑6 31- 45 دقيقة
❑7 أكثر من 45 دقيقة

ب- ماهو تقييمك لذلك ؟

❑1 سيء جداً ❑2 سيء ❑3 لاباس ❑4 جيد ❑5 جيد جداً ❑6 ممتاز

10- في المرات التي قمت بها بالإتصال الهاتفي على العيادة ، كيف تقيم التالي ؟

أ- إمكانية الإتصال هاتفياً مع أحد موظفي الإستقبال (للإستفسار أو حجز موعد)

❑1 سيء جداً ❑2 سيء ❑3 لاباس ❑4 جيد ❑5 جيد جداً ❑6 ممتاز ❑7 لاأدري/ لم يسبق لي المحاولة

ب- إمكانية الإتصال هاتفياً بالطبيب للحصول على استشارات طبية أو إجابات على تساؤلات أو نصيحة طبية

❑1 سيء جداً ❑2 سيء ❑3 لاباس ❑4 جيد ❑5 جيد جداً ❑6 ممتاز ❑7 لاأدري/ لم يسبق لي المحاولة

11- السؤال التالي يسأل عن طبيبك المعتاد ، إذا لم يكن عندك طبيب معين تراجعه دائماً وبينكم معرفة وعلاقة الرجاء الإجابة إستناداً على أكثر طبيب تعرفه في هذا المستوصف حتى لو كانت معرفة بسيطة ، وإذا لم يكن لديكم أي معرفة إطلاقاً بأي طبيب بهذا المستوصف الرجاء الانتقال إلى سؤال رقم(20)

12- أ- بشكل عام ، كم هي المرات التي تتاح لك فيها رؤية طبيبك المعتاد ؟

❑1 دائماً ❑2 تقريباً دائماً ❑3 أغلب المرات ❑4 بعض المرات ❑5 تقريباً ولا مرة ❑6 أبداً ولا مرة

ب- كيف تقيم هذا الوضع ؟

❑1 سيء جداً ❑2 سيء ❑3 لاباس ❑4 جيد ❑5 جيد جداً ❑6 ممتاز

13- عندما تتخاطب مع طبيبك المعتاد داخل العيادة ، ماهو تقييمك للتالي.:

أ- اهتمام وعمق الأسئلة التي يطرحها طبيبك حول أعراض مرضك وحالتك؟

❑1 سيء جداً ❑2 سيء ❑3 لاباس ❑4 جيد ❑5 جيد جداً ❑6 ممتاز

ب- استماع أو انصات طبيبك جيداً لما تقول ؟

❑1 سيء جداً ❑2 سيء ❑3 لاباس ❑4 جيد ❑5 جيد جداً ❑6 ممتاز

ج- جودة شرح طبيبك لك عن مشاكلك الصحية أو أي علاج قد تحتاجه؟

❑1 سيء جداً ❑2 سيء ❑3 لاباس ❑4 جيد ❑5 جيد جداً ❑6 ممتاز

14- كم هي المرات التي غادرت فيها عيادة الطبيب ولديكم أسئلة لم تستطع طرحها؟

❑1 دائماً ❑2 تقريباً دائماً ❑3 أغلب المرات ❑4 بعض المرات ❑5 تقريباً ولا مرة ❑6 أبداً ولا مرة

15- حينما نتحدث عن العلاقات الشخصية في الرعاية الصحية بينك وبين طبيبك الخاص ، كيف يمكن تقييم التالي:

أ- مقدار الوقت الذي يمضيه طبيبك معك داخل العيادة ؟

❑1 سيء جداً ❑2 سيء ❑3 لاباس ❑4 جيد ❑5 جيد جداً ❑6 ممتاز

ب- صبر الطبيب على أسئلتك ومخاوفك

❑1 سيء جداً ❑2 سيء ❑3 لاباس ❑4 جيد ❑5 جيد جداً ❑6 ممتاز

ج- رعاية واهتمام طبيبك بك

❑1 سيء جداً ❑2 سيء ❑3 لاباس ❑4 جيد ❑5 جيد جداً ❑6 ممتاز

16-بالنسبة الى جانب الناحية النفسية في علاقتك مع الطبيب ، كيف تقيم التالي:

أ- تفهم طبيبك حاجاتك النفسية والمعنوية

❑1 سيء جداً ❑2 سيء ❑3 لاباس ❑4 جيد ❑5 جيد جداً ❑6 ممتاز ❑7 لا أدري لا ينطبق علي

ب- حجم مساعدة طبيبك في التعامل مع مشاكلك النفسية

❑1 سيء جداً ❑2 سيء ❑3 لاباس ❑4 جيد ❑5 جيد جداً ❑6 ممتاز ❑7 لا أدري لا ينطبق علي

17- فيما يخص معرفة الطبيب بك ، كيف تقيم التالي:

أ- معرفة طبيبك بتاريخك المرضي

❑1 سيء جداً ❑2 سيء ❑3 لابأس ❑4 جيد ❑5 جيد جداً ❑6 ممتاز

ب- معرفة طبيبك بأكثر شيء يقلقك من ناحية صحتك

❑1 سيء جداً ❑2 سيء ❑3 لابأس ❑4 جيد ❑5 جيد جداً ❑6 ممتاز

ج- معرفة طبيبك بمسؤلياتك سواء في المنزل أو العمل أو المدرسة

❑1 سيء جداً ❑2 سيء ❑3 لابأس ❑4 جيد ❑5 جيد جداً ❑6 ممتاز

18أ- في الأشهر الإثني عشر الماضية ، هل شعرت بالحاجة بمراجعة طبيب أخصائي ؟

❑1 نعم — الرجاء الانتقال إلى سؤال 18 ب
❑2 لا — انتقل إلى سؤال 19

18ب- لو كانت الإجابة على السؤال السابق بنعم ، هل قام طبيبك بتحويلك إلى أخصائي؟

❑1 نعم
❑2 لا

19-بعد زيارتك لطبيبك المعتاد ،بشكل عام حدد :

19أ- مدى فهمك لمشكلتك الصحية ؟

❑1 أفضل بكثير مما كنت علية قبل الزيارة ❑2 أفضل قليلاً بعد الزيارة ❑3 نفس أو أقل مما كنت قبل الزيارة ❑4 لاينطبق هذا علي

19ب- قدرتك على التعامل مع مشاكلك الصحية ؟

❑1 أفضل بكثير مما كنت علية قبل الزيارة ❑2 أفضل قليلاً بعد الزيارة ❑3 نفس أو أقل مما كنت قبل الزيارة ❑4 لاينطبق هذا علي

19ج- قدرتك على المحافظة على نفسك وصحتك؟

❑1 أفضل بكثير مما كنت علية قبل الزيارة ❑2 أفضل قليلاً بعد الزيارة ❑3 نفس أو أقل مما كنت قبل الزيارة ❑4 لاينطبق هذا علي

20- في الأشهر الإثني عشر الماضية ، هل راجعت الممرض في المستوصف ؟

❑1 نعم — الرجاء الانتقال إلى سؤال 21
❑2 لا — انتقل إلى سؤال 22

21- لو كانت إجابتك على السؤال السابق بنعم ، كم مرة قابلت <u>الممرض</u> / الممرضة في مستوصفك ؟

الرجاء حدد (خمس مرات مثلاً) .....

22- <u>عن الممرض</u> الذي قابلت خلال المراجعة ، ماهو تقييمك للتالي:

أ- مدى استماع الممرض لما قول؟

❑1 سيء جداً ❑2 سيء ❑3 لابأس ❑4 جيد ❑5 جيد جداً ❑6 ممتاز

ب- جودة الخدمة التي تلقيتها من الممرض؟

❑1	❑2	❑3	❑4	❑5	❑6
سيء جداً	سيء	لابأس	جيد	جيد جداً	ممتاز

ج- مدى شرحه أو شرحها عن مشاكلك الصحية أو أي علاج قد تحتاجه ؟

❑1	❑2	❑3	❑4	❑5	❑6
سيء جداً	سيء	لابأس	جيد	جيد جداً	ممتاز

23- بالنظر إلى الجانب الديني والجوانب الأخرى مثل العادات والتقاليد وخصوصية الرجل والمرأة، كيف تقيم التالي:

أ- الأطباء في المركز الصحي يتحدثون إليك باحترام؟

❑1	❑2	❑3	❑4	❑5	❑6
سيء جداً	سيء	لابأس	جيد	جيد جداً	ممتاز

ب- الأطباء في المركز الصحي يتحدثون إليك باستخدام لغة مبسطة ومفهومة ؟

❑1	❑2	❑3	❑4	❑5	❑6
سيء جداً	سيء	لابأس	جيد	جيد جداً	ممتاز

ج- الممرضين في المركز الصحي يتحدثون إليك باحترام ؟

❑1	❑2	❑3	❑4	❑5	❑6
سيء جداً	سيء	لابأس	جيد	جيد جداً	ممتاز

د- الممرضين في المركز الصحي يتحدثون إليك باستخدام لغة مبسطة ومفهومة؟

❑1	❑2	❑3	❑4	❑5	❑6
سيء جداً	سيء	لابأس	جيد	جيد جداً	ممتاز

هـ موظفي الاستقبال في المركز الصحي يتحدثون إليك باحترام ؟

❑1	❑2	❑3	❑4	❑5	❑6
سيء جداً	سيء	لابأس	جيد	جيد جداً	ممتاز

و- موظفي الاستقبال في المركز الصحي يتحدثون إليك باستخدام لغة مبسطة ومفهومة؟

❑1	❑2	❑3	❑4	❑5	❑6
سيء جداً	سيء	لابأس	جيد	جيد جداً	ممتاز

د- الطبيب يظهر لك اهتماماً وحرصاً على احترام واجباتك الدينية

❑1	❑2	❑3	❑4	❑5	❑6
سيء جداً	سيء	لابأس	جيد	جيد جداً	ممتاز

د- لو رغبت في رؤية طبيب أو طبيبة (من نفس جنسك) لأن ذلك أنسب لك ، ماهو تجاوب القائمين على المستوصف ؟

❑1	❑2	❑3	❑4	❑5	❑6
سيء جداً	سيء	لابأس	جيد	جيد جداً	ممتاز

24- بالنظر إلى تنوع وتنظيم الخدمات الصحية المقدمة من قبل المستوصف ، كيف تقيمون التالي:

أ- توفر الأدوية المصروفة من قبل الطبيب في الصيدلية

❑1	❑2	❑3	❑4	❑5	❑6
سيء جداً	سيء	لابأس	جيد	جيد جداً	ممتاز

ب- توفر أخصائيين بالمستوصف وبعض التخصصات الأخرى كطبيب الأسنان

❑1	❑2	❑3	❑4	❑5	❑6

سيء جداً سيء لاباس جيد جيد جداً ممتاز

ج- تنظيم وترتيب غرف الانتظار بالمستوصف

❑1 ❑2 ❑3 ❑4 ❑5 ❑6

سيء جداً سيء لاباس جيد جيد جداً ممتاز

د- مستوى النظافة والاهتمام بمبنى المستوصف

❑1 ❑2 ❑2 ❑4 ❑5 ❑6

سيء جداً سيء لاباس جيد جيد جداً ممتاز

25- بالنظر لموضوع مشاركة المجتمع في عمل المركز الصحي أو المستوصف ، كيف تقيمون التالي:

أ- دور المستوصف في المساهمة في تفعيل مشاركة المجتمع؟

❑1 ❑2 ❑3 ❑4 ❑5 ❑6

سيء جداً سيء لاباس جيد جيد جداً ممتاز

ب- هل المستوصف يطلع المراجعين على أنشطته ويبقيهم على إطلاع دائم

❑1 ❑2 ❑3 ❑4 ❑5 ❑6

سيء جداً سيء لاباس جيد جيد جداً ممتاز

ج- مدى مساهمتك في أنشطة وفعاليات المركز الصحي (المستوصف) وذلك من باب مشاركة المجتمع في فعاليات المركز؟

❑1 ❑2 ❑3 ❑4 ❑5 ❑6

سيء جداً سيء لاباس جيد جيد جداً ممتاز

26- بالنظر إلى جميع ماذكر أعلاه ، إلى أي مدى أنت راض عن المستوصف (الرجاء اختيار إجابة واحدة فقط)

1❑ غير راضي إطلاقاً
2❑ غير راضي
3❑ غير راضي نوعاً ما
4❑ لم أحدد رأياً
5❑ راضي نوعاً ما
6❑ راضي جداً
7❑ راضي تمام الرضى

27- عند الحديث عن أهم العناصر في الرعاية الصحية بالنسبة لك ، الرجاء وضع اختيارك أمام كل عنصر وذلك حسب مستوى أهميتها بالنسبة لك:

عناصر الرعاية الصحية	مهم للغاية	مهم جداً	مهم	لا أدري	غير مهم	غير مهم اطلاقاً
1- الوصول إلى خدمات المركز الصحي (سهولة المواعيد، وقت الانتظار قبل الدخول على الطبيب ألخ)						
2-إقامة علاقة طيبة ومعرفة مع الطبيب						
3-المعلومات التي يعرفها الطبيب عنك وعن حالتك المرضية.						
4--نظام الإحالة إلى أخصائي أو استشاري						
5--مساعدة الطبيب على تخطي المرض وتمكينك من التعامل معه						
6-الرعاية المقدمة من الكادر التمريضي وطريقة تعاملهم معك						
7-عمل موظفي الاستقبال وطريقة تعاملهم معك						
8- إشراك المجتمع في عمل المركز الصحي						
9- الجوانب النفسية ودور الطبيب في ذلك						
10- الجوانب الدينية						
11-استمرارية العلاج وتكوين علاقة طويلة مع الطبيب						

12-موضوع اتخاذ القرارات الطبيبة وتبادل المعلومات حول خيارا						
13-الرضي بشكل عام عن خدمات المركز الصحي						
14-توفر تخصصات طبيبة في المركز الصحي وحسن التنظيم الإداري						

28- في الختام لمساعدتنا على فهم أجوبتك الرجاء إعطائنا بعض المعلومات عنك
أ- خلال الإثني عشر شهراً الماضية كانت صحتك بشكل عام

❑1 جيد جدًا ❑2 جيد ❑3 وسط ❑4 سيئة ❑4 سيئة جدًا

29- هل تعاني من أمراض دائمة أو مشاكل صحية أو إعاقة تحد من أنشطتك اليومية أو الأعمال التي تستطيع القيام بها (ذلك يشمل الأمراض المتعلقة بالتقدم بالعمر)

❑1 نعم ❑2 لا

30- ماهو جنسك، هل أنت:

❑1 ذكر ❑2 أنثى

31-كم عمرك؟ ..... سنة

32-ماهي جنسيتك

❑1 سعودي ❑2 غير سعودي

33-معلومات السكن

❑1 السكن ملك ❑2 السكن إيجار بطريق شخصي ❑3 السكن إيجار عن طريق العمل ❑4 طرق أخرى

34-ماهي وسيلة المواصلات التي تستخدمها للوصول للمستوصف ؟

❑1 مشياً على الأقدام
❑2 مواصلات عامة (تاكسي ، باص ، تنقلات العمل)
❑3 سيارتك الخاصة

35-المعلومات الوظيفية /عسكريين

1 ❑جندي - عريف
2 ❑ وكيل رقيب – رقيب أول
3 ❑ رئيس رقباء
4 ❑ ملازم - نقيب
5 ❑ رائد - مقدم
6 ❑ عقيد - عميد
❑7 لواء
❑8فريق
❑9 فريق أول

❑10 عسكري متقاعد (الرجاء تحديد الرتبة .....)
❑11 طالب عسكري

36- المعلومات الوظيفية / مدنيين

1❑ موظف حكومي/ الرجاء تحديد المرتبة .....
2❑ مدني متقاعد
3❑ موظف قطاع خاص (رجل أعمال ، تاجر ، متسبب)
4❑ربة منزل
5❑ طالب / طالبة
6❑ موظفة
7❑ أخرى (الرجاء التحديد).....
8❑ غير موظف ولايعمل (عاطل عن العمل)

37- أخر مؤهل دراسي حصلت عليه <u>لجميع الفئات أعلاه</u>
1❑ غير متعلم لاأحمل شهادة (لايقرأ ولايكتب)
2❑ الشهادة الإبتدائية
3❑ الشهادة المتوسطة
4❑ شهادة الثانوية العامة
5❑ شهادة مادون الجامعة (دبلوم إلخ) الرجاء حدد.....
6❑ بكلوريوس كلية عسكرية
7❑ شهادة جامعية
8❑ شهادة دراسات عليا (ماجستير ، أركان ، دكتوراه)
9❑ أخرى (الرجاء التحديد).....

38- معلومات الحالة الإجتماعية <u>لجميع الفئات أعلاه</u>
1❑ متزوج
2❑عازب
3❑مطلق
4❑أرمل

شكراً جزيلاً لتعاونكم،،،،